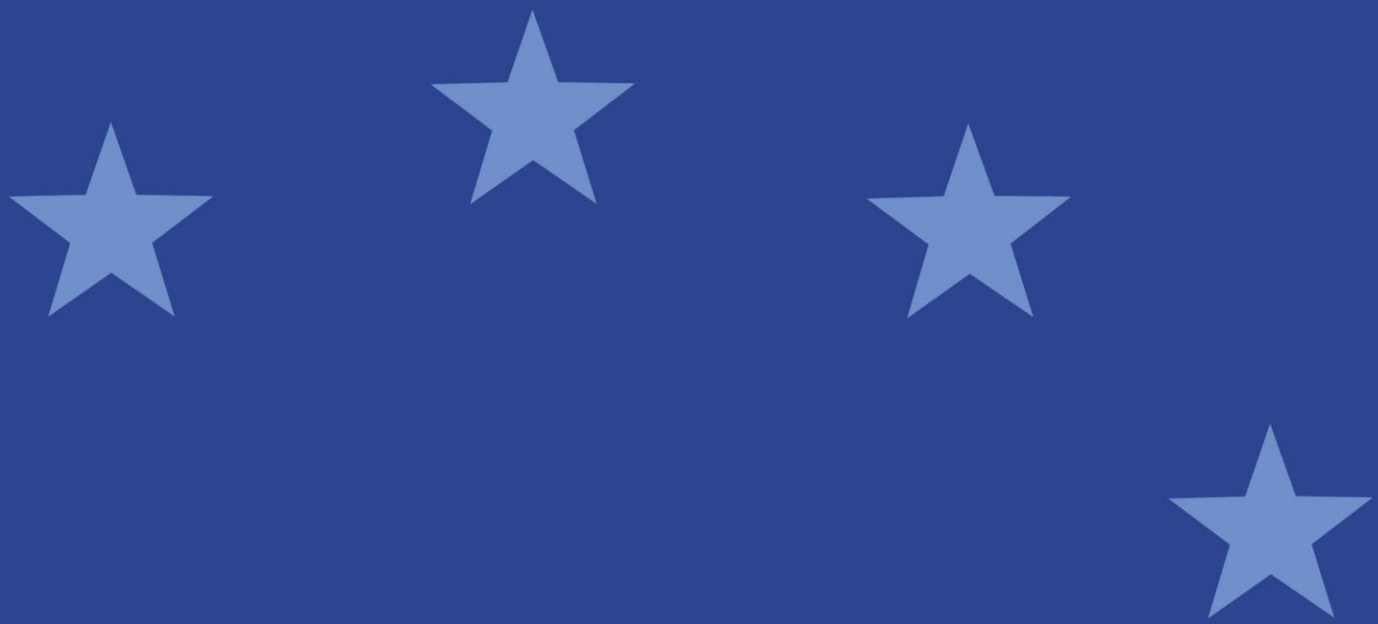
esma European Securities and Markets Authority

Final Report

ESMA's technical advice on the evaluation of the Regulation (EU) 236/2012 of the European Parliament and of the Council on short selling and certain aspects of credit default swaps



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Acronyms used

CCP	Central counterparty
CDS	Credit Default Swap
CfE	Call for Evidence (ESMA/2013/203)
CSD	Central securities depository
DR	Delegated Regulation
EC	European Commission
ESMA	European Securities and Markets Authority
ETF	Exchange Traded Funds
MiFID	Directive 2004/39/EC of the European Parliament and of the Council of 21 April 2004 on market in financial instruments
MS	Member State
NAV	Net asset value
OTC	Over-the-Counter
RTS	Regulatory Technical Standard
SME	Small and Medium Enterprises
SSR	Short-Selling Regulation
TD	Directive 2004/109/EC of the European Parliament and of the Council of 15 December 2004 on the harmonisation of transparency requirements in relation to information about issuers whose securities are admitted to trading on a regulated market and amending Directive 2001/34/EC (Transparency Directive)
UCITS	Undertakings for Collective Investment in Transferable Securities

I. Executive Summary

Reasons for publication

The Regulation on short selling and certain aspects of credit default swaps (the Regulation) lays down a common regulatory framework with regard to the requirements and powers relating to short selling and sovereign credit default swaps and ensures greater coordination and consistency between Member States. The Regulation aims to enhance transparency, reduce certain risks associated with short selling and uncovered CDS and ensure a common regulatory approach across Member States. It has been in application since 1 November 2012.

The European Commission is under an obligation to report to the European Parliament and the Council by 30 June 2013 on the appropriateness, impact and operation of the Regulation's requirements and restrictions. The Regulation requires the Commission to discuss these issues with the competent authorities and ESMA before doing so. As part of the review process, the Commission has given a formal mandate to ESMA seeking its Technical Advice on the evaluation of the Regulation by 31 May 2013.

In order to inform and evidence its Technical Advice to the extent possible considering the limited time frame available, ESMA has conducted a quantitative analysis and, for more qualitative inputs, organised a public consultation in the form of a Call for Evidence and a survey among national competent authorities.

In line with ESMA's policy, the Technical Advice to be delivered to the Commission is made public.

Contents

In each of the following sections, the ESMA advice to the Commission is presented preceded by the various findings, including an overview of the results of the quantitative analysis conducted by ESMA and the feed-back from the public Call for Evidence and from the survey among competent authorities.

In terms of the general impact of the Regulation described in Section II, ESMA observed mixed effects on liquidity and a slight decrease in price discovery. However, ESMA acknowledges that the findings of the Technical Advice should be interpreted with caution considering, first, the difficulty in identifying the specific effects of the Regulation and, second, the limited time period for the assessment resulting from the tight schedule imposed by the Regulation itself. Therefore, ESMA invites the European Commission to revisit the assessment of the Regulation at a later stage.

Section III specifically deals with the transparency and reporting requirements. From the analysis of net short positions in shares reported to competent authorities and disclosed to the public, it can be concluded that overall investors are relatively averse to crossing the publication threshold of 0.5%. ESMA considers that the current reporting and disclosure thresholds are appropriate and only suggests considering some technical improvements; a) in the method for calculating net short positions, notably to facilitate the access by investors to information on indices and on issued share capital, and b) in the information provided to the competent authorities and to the public through the notifications in the case of actively managed funds and on positions held through convertible bonds or subscription rights. However, with respect to net short positions in sovereign debt, noting the very low number of notifications received, ESMA

recommends to revisit the method of calculation, particularly the duration-adjusted approach, and to review the thresholds for notifications.

Section IV covers the restrictions on uncovered short sales in shares and sovereign debt. The introduction of these restrictions has had, as intended, a noticeable impact on the incidence of settlement failure, though this improvement in settlement discipline may have affected the securities lending market. Thus, ESMA recommends considering some adjustments to the regime, notably to allow internal locate arrangements within the same legal entity provided that appropriate separations between internal trading and lending desks are put in place. ESMA also suggests revisiting the issue of the definition of "liquid shares" for the purpose of locate arrangements at a later stage, when proper regulatory data on securities lending would be available.

Section V considers the related issue of requirements on buy-in procedures and penalties for settlement discipline purposes. The Regulation allowed for a first EU-wide experience in the matter, though with some limitations. ESMA supports the views, already stated in the Regulation itself, that a wider and more harmonised regime should be addressed through horizontal European legislation, namely the forthcoming CSD Regulation, to cater for the particular cases of illiquid shares and SME shares while ensuring a level playing field in terms of application.

Section VI presents the assessment of the impact of the ban on uncovered sovereign CDS transactions. Overall, this restriction seems to have no compelling impact at this stage on the liquidity of EU single name CDS as well as on the related sovereign bonds markets, even though a decline in activity for sovereign CDS in a few EU countries and reduced liquidity in European sovereign CDS indices could be noticed. Acknowledging that this area should be kept under review in light of gained experience, ESMA nevertheless suggests that higher legal certainty could be pursued by clarifying some wording in the legal text (e.g. on the correlation test) and that some refinements to the detailed provisions could be envisaged: use of sovereign CDS indices for hedging purposes, cross-border hedging under certain liquidity and correlation circumstances and group hedging by a particular and dedicated entity.

Section VII describes the practical problems, complications and cost-related issues encountered with the approach for determining the list of shares that are exempted from the Regulation on the basis of turnover calculations. It also includes a suggestion for an alternative approach to draw up such a "negative list" which is essentially based on two criteria: the domicile of the issuer and whether admission to the European venue has been requested by that issuer.

Section VIII deals with the exemption for market making activities. Despite the recently published ESMA guidelines, ESMA considers that further clarifications are needed and that changes to the Level 1 text may be worth considering. Areas for potential changes would relate to the scope of the exemption and the conditions for being able to make use of the exemptions. The trading venue membership requirement might be reviewed so as to allow also market making activities on purely OTC traded instruments to benefit from the exemption and the scope of financial instruments eligible for the exemption could be expanded. With respect to the notification procedure, ESMA suggests to consider a change in the instrument per instrument approach for the purpose of notifications and not to apply the 30 day period for objecting to use of the exemption to newly admitted instruments.

Finally, Section IX deals with intervention powers and emergency measures. Mixed market impacts have been noticed in relation to the longer term emergency measures in case of adverse events or developments constituting a threat to financial stability or market confidence that were introduced by a couple of EU countries and have since been fully or partially lifted. Nonetheless, ESMA considers that the provisions

allowing to impose such measures are necessary and appropriate. On the basis of the few concrete experiences of short term bans imposed in case of a significant fall in price of a financial instrument, no clear conclusion could be drawn as to their effectiveness. However, ESMA considers that the approach for introducing such temporary bans should be reconsidered with the view to simplify and ensure more consistency in their application.

Annex I contains the formal request to ESMA from the European Commission for Technical Advice and Annex II presents the detailed quantitative analyses conducted by ESMA.

II. Background and introduction

1. ESMA has received a formal mandate from the European Commission (Annex I) seeking a Technical Advice on the evaluation of Regulation (EU) No 236/2012 on short selling and certain aspect of credit default swaps (the Regulation) that became applicable on 1 November 2012. ESMA's advice, to be delivered by 31 May 2013, should contribute to the Report the Commission has to submit to the European Parliament and the Council by 30 June 2013 for the review of the Regulation to be conducted pursuant to Article 45 of the Regulation.

2. ESMA is expected to report on the observable effects of the Regulation. In short, ESMA is asked to analyse:

    a. the market impacts of the transparency requirements, restrictions on uncovered short selling and uncovered sovereign CDS and of any temporary measures (introduced or lifted);

    b. whether the current provisions of the Regulation and their application are fulfilling the needs of market participants in terms of transparency and the needs of the regulators to perform their supervisory functions.

3. The mandate requires ESMA to provide factual information and evidence. In line with this mandate ESMA conducted, on the one hand, an evaluation of empirical evidence for a quantitative analysis. On the other hand, ESMA performed a more qualitative analysis relying on surveys of market participants and competent authorities.

4. On the basis of data on net short positions on shares and sovereign debts collected from national competent authorities (NCA), on information on temporary measures imposed since 1 November 2012 and on financial market data from commercial databases, ESMA proceeded to a quantitative analysis on the following main issues identified in the mandate:

    a. whether and to what extent the beneficial effects of short selling for volatility and price formation during normal times have been impacted by reporting and publication requirements or restrictions on uncovered short selling;

    b. to what extent any temporary restrictions imposed by competent authorities on short selling have had any positive effects in terms of reducing price falls, or any negative effects on volatility and price formation;

    c. to what extent the thresholds set for notification to competent authorities are appropriate for their supervisory purposes and the thresholds for public disclosure are appropriate for the market's needs;

    d. whether the thresholds set to identify a significant drop in the price of financial instruments are appropriate for all instruments, and whether (and if so how) thresholds should be set for significant price falls in UCITS and commodity derivatives;

    e. whether and to what extent the ban on naked sovereign CDS has had any effects in terms of market prices and volatility.

5. The detailed quantitative analyses on these issues, including methodologies and data used can be found in Annex II. Where possible, the analysis includes comparison of data before and after the entry into force of the Regulation on 1 November 2012.

6. In addition, to inform its advice on the evaluation of the Regulation, ESMA issued a Call for Evidence (ESMA/2013/203) (the CfE) for a one-month public consultation, to seek the views of market participants (practitioners, consumers and end-users) and to collect evidence on the Regulation's requirements and their operation. The CfE focused on the six main areas of the Regulation: transparency and reporting requirements; restrictions on short selling of shares and sovereign debt; restrictions on entering into uncovered sovereign credit default swap positions; settlement discipline, including buy-in procedures; exemptions from provisions of the Regulation; and intervention powers and emergency measures.

7. ESMA received 43 responses to the CfE, although only a few of them provided inputs on all the questions raised, as many respondents decided to focus their responses on topics of particular interests to them. All contributions are published on the ESMA website (http://www.esma.europa.eu/consultations/overview/10) except where confidentiality of the response was explicitly requested.

8. Almost half of the respondents represent the sell side[1] (including national and European professional associations), the buy side2 accounts for more than 15% of the respondents (including major asset managers' associations) and 3 respondents are professional associations representing members from both the buy and sell side. Entities active in the business of market infrastructure, mostly operators of trading venues, constitute the second largest group of respondents (almost 25%).

9. In parallel, and along the same lines of the CfE, ESMA conducted a survey of competent authorities with a focus on the ability to perform their supervisory functions.

Remarks and findings on the general impact of the Regulation

Impact of the Regulation on market conditions

10. It should be noted that the overall quantitative analysis presented in this final report is subject to three main caveats: first, there is only a short time span since the entry into force of the Regulation (about five months) and more data is needed to ensure that the results are robust and the sample periods representative; second, the methods used are subject to model risk and empirical limits that are outlined in Annex II; lastly, despite the use of control groups and variables to isolate the effects of the Regulation, there is a risk that the analysis captures nonetheless certain external factors that may distort some of our results.

11. Nevertheless, and in line with the mandate, a quantitative assessment of the impact of the Regulation on price formation and volatility was made. This was done by comparing the average of different metrics before and after the Regulation for European shares, relatively to the evolution of the same metrics for a control group of shares (US stocks) not subject to the Regulation[3]. Overall, there

[1] Active in banking and investment services.
[2] Active in insurance, pension & asset management
[3] See Annex II for detailed analyses.

was a slight decline in volatility of EU stocks compared US stocks. There were mixed effects on liquidity, with a decrease in bid-ask spreads and no significant impact on traded volumes. Finally, price discovery seems to have decreased compared to the period before the entry into force of the Regulation. Those results should however be interpreted with due care considering the difficulty in identifying the specific effects of the Regulation.

Limited time scale for conducting the evaluation

12. Many respondents to the CfE commented that, while acknowledging the time scale set out in the Regulation for the review process, it was too early after its application date to conduct a proper data backed assessment, including meaningful empirical analysis. In addition, a number of them noted that the ESMA guidelines on market making activities and primary dealers operations had not entered into force at the time of the consultation, making it more difficult to assess the impact of the overall framework.

13. Competent authorities generally share this view. They note that their supervisory experience has been too limited to properly assess the impact of the Regulation and its implementing texts and to draw meaningful conclusions as to whether the Regulation's goals of improving the conditions of market functioning and ensure a high level of investor protections have been achieved. In high level terms, some welcome the harmonised legal framework for short selling and believe that the information on net short positions is globally useful.

ESMA recommendation

14. In light of the above, ESMA recommends to the Commission to take the conclusion of the analysis with a degree of caution. Beyond the particular recommendations included in this Technical Advice, ESMA nevertheless suggests that the Commission revisits the assessment of the Short Selling Regulation and its implementing texts at a later stage, once more data and greater experience will be available. ESMA also remains mindful of the cost implications that changes in the legislative framework shortly after its entry into force might have on investors and on competent authorities.

III. Transparency and reporting requirements

Extract from the Commission's request

ESMA is asked to consider whether and to what extent the beneficial impacts of short selling for volatility and price formation during normal times have been impacted by reporting and publication requirements (…) and to what extent the thresholds set for notification to CAs are appropriate for CAs' supervisory purposes and the thresholds for public disclosure are appropriate for the market's needs

ESMA's statistical analysis would include an analysis of published short positions since the regime has entered into force;

In addition, ESMA would conduct a representative survey of market participants and competent authorities on whether reported information is sufficient for CAs to perform their functions, including monitoring and supervision of systemic risk, market stability and market abuse,and, on whether published information is sufficient for market participants to better understand market dynamics,

15. The Regulation lays down various requirements concerning the reporting by investors of significant net short positions in shares and sovereign debt. The purpose of the enhanced transparency is to benefit both regulators and market participants. For regulators, the objective is to enable them to monitor and, where necessary, investigate short selling activities that could create systemic risks, be abusive or create disorderly markets. Public disclosures are intended to provide useful information to other market participants about significant individual short positions in shares. Investors need to compute their positions in an asset at the end of each trading session. When crossing relevant thresholds, positions should be reported by 3.30 p.m. the following day local time of the relevant competent authority.

III- I. Shares: reporting thresholds

16. Investors are required to report significant net short positions which they hold in relation to the issued share capital of a listed company to the relevant competent authority and to the public, when their position equals or crosses up or down specified thresholds. The relevant threshold for reporting to competent authorities is set at 0.2% of the share capital while the relevant threshold for disclosure to the market is set at 0.5%. The incremental levels for both reporting and disclosure are set at any following change of 0.1%. Thus a notification to the competent authority corresponds either to a newly created position or to a modification of an existing one.

Findings

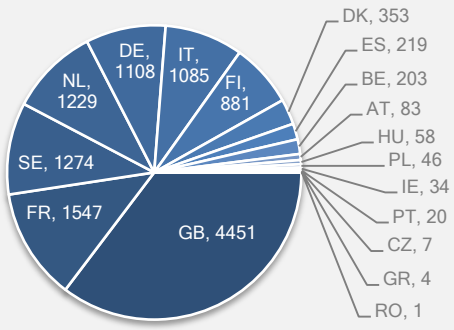
Empirical evidence on short selling notifications in shares

17. Between 1 November 2012 and 28 February 2013, there were 12,603 notifications reported to competent authorities on 970 different shares in 18 countries (Chart C.02). 74% of these notifications were within the 0.2% and 0.5% thresholds; the other 26% stood above 0.5% and were therefore disclosed to the public.

18. There were 460 holders that reported a combined 4,001 short positions, on which 8,602 modifications occurred during the reporting period.

19. Only a few holders shorted a large number of shares, with 75% of holders shorting on seven different shares or less. Short position holdings were quite concentrated, as ten entities held more than 28% of all the positions reported in the period. Around 83% of all the reported short positions were held by entities domiciled in the UK or the US.

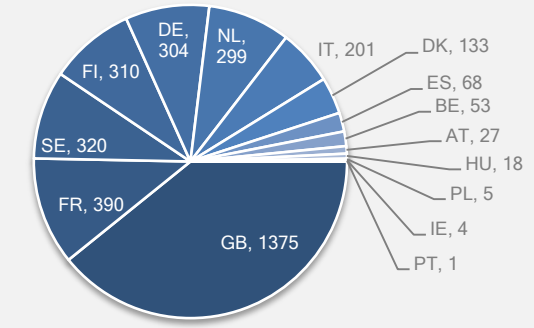
Number of notifications C.02



Note: Number of notifications , counted by Reporting Competent Authority, 1/11/2012 to 28/2/2013.
Sources: National Competent Authorities, ESMA.

20. Among the 3508 notifications made public by 224 holders, 90% were also from holders domiciled in the UK or the US, and the ten biggest holders accounted for 37.5% of those published notifications. These notifications represent 1,090 short positions on 427 shares among which 679 were new short positions directly created above the 0.5% threshold whereas the rest crossed it at some point during the period (Chart C.03).

Number of published short positions C.03



Note: Number of notifications published, by Reporting Competent Authority, 1/11/2012 to 28/2/2013.
Sources: National Competent Authorities, ESMA.

21. Overall, the biggest holders of net short positions were investment funds and asset managers, with only five banking entities in the top 50 holders in terms of number of short positions held[4]. The shares most subject to short selling belonged to the industrial goods and services sector (18.2% of all reported short positions) whereas 9.7% of all reported short positions were held on the technolo-

[4] The fact that banks did not report many short positions might be linked to the reporting exemptions available to market makers under the Regulation.

gy sector (the second most shorted sector). Financials and banks accounted for 3.6% each and insurance for 2.1%. The 63% remaining are split across 14 other sectors[5].

Feed-back from market participants and competent authorities

22. Almost all competent authorities have considered that the current reporting thresholds and incremental levels for shares are appropriate for their supervisory purposes. However, the current thresholds on shares received mixed views from market participants. While some respondents have considered the thresholds to be appropriate, others have argued that the current thresholds are too low, especially if compared with the thresholds applicable to the disclosure of long positions, pursuant to the Transparency Directive (TD).

23. Some respondents also commented that the incremental thresholds were too narrow and required more reporting of short positions than what would be useful. Some widening of the increments was therefore suggested.

24. Regarding the publication of net short positions, according to Article 3 of DR No. 826/2012 the following information is disclosed: (i) name of the position holder; (ii) name of the issuer; (iii) ISIN code; (iv) net short position in terms of percentage on the share capital; (v) position date. It should be noted that competent authorities receive additional information on the net short position, most notably the free-text field "Comments" where investors can enter any remarks on the reported position.

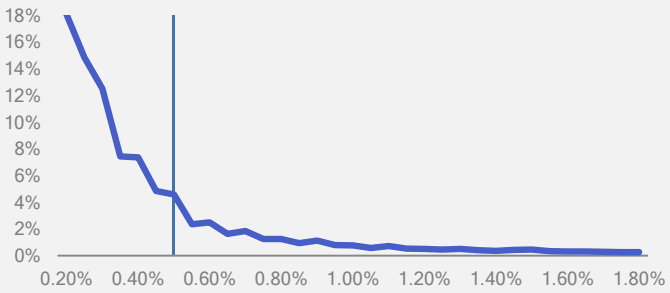
25. The disclosed information on net short positions has been considered useful by some market participants. However, others respondents have raised the issue that published information could lead to herding behaviour, originating market distortions. Others have reported behaviour changes from investors who would tend to remain under the 0.5% thresholds to avoid disclosure. A few participants have stated that some companies have refused to meet or give information to investors who have disclosed large net short positions and this, in turn, was considered harmful both for the investors (e.g. less information on the issuers) and for the issuers (e.g. risk of losing access to funding) although no specific examples were given.

Quantitative analysis on the impact of published positions

26. A short position is to be publicly disclosed when it is equal to or greater than 0.5% of the issued share capital. ESMA has tried to assess whether market participants are averse to crossing this threshold. Chart C.04 displays the frequency of notifications given the size of the position reported. 75% of notifications fall between the thresholds.

[5] See details in Annex II.

Frequency of notifications C.04



Note: Frequency of notifications by size of the positions notified, in % of total number of notifications. Truncated at 1.8% for readability purposes, therefore representing 96% of all notifications. The vertical line shows the public disclosure threshold (0.5%). 1/11/2012 to 28/2/2013.
Sources: National Competent Authorities, ESMA.

27. We analyse the frequency of movements around the public disclosure threshold and measured how often the threshold is crossed. Around one sixth of the short positions were reported directly above the 0.5% threshold; out of these, one in three was subsequently modified and fell under the 0.5% threshold at some point during the observed period. This suggests that at least some investors do not mind publicly reporting their position.

28. However, only 14.5% of the positions held below the 0.5% threshold moved above the threshold, among which half crossed it back. To the same extent, only one fourth of the positions reported close to 0.5%, and above 0.4%, crossed the public disclosure threshold. This may indicate reluctance from some market participants to disclose their short positions to the public.

29. Overall, it seems that market participants had a tendency to settle on one side or the other of the threshold and avoid crossing it. This would suggest that holders' behaviour is pre-determined, i.e. over time a holder is sticking to its initial decision on whether to go public on a given position. This would mean that the public disclosure threshold has an effect on short-selling activities, and even though no strict conclusion is to be drawn from the available data, it can be suspected that some actors prefer to stay below the 0.5% threshold and not to disclose information on their short-selling activity.

ESMA proposal of advice

30. As regards the comparison of the thresholds for disclosure of long and short positions ESMA notes that the Regulation and TD pursue different objectives. The aim of the transparency of net short positions is to enable competent authorities to monitor and, where necessary, investigate short selling that could create systemic risk, be abusive or create disorderly markets. Public disclosures of net short positions are intended to provide useful information to assist the price discovery process. The objective of the disclosure of long positions is instead to provide information on the shareholders who can influence the issuer's decisions. In ESMA view, the different objectives of those two pieces of EU legislation justify the different threshold levels applicable to net short positions and long positions.

31. Moreover, the current thresholds of the Regulation have been set taking into accounts the works conducted by CESR (CESR/10-088) in order to identify reporting thresholds that could generate

both meaningful information for competent authorities and the market as well as a proportionate compliance burden on investors.

32. Therefore, ESMA advises that the current reporting thresholds and incremental levels for shares are appropriate and should be unchanged.

III- II. Shares: calculation of net short positions

33. In the calculation of net short positions in shares, investors have to include long and short positions in all classes of shares issued by the listed company (e.g. common stock, preferred, saving, etc.) including positions held through any instruments listed in Annex I, Part 1, of DR No. 826/2012 (e.g. derivatives, ADR, etc.). It should be noted that instruments that relate to "unissued" share capital, like subscription rights and convertible bonds that convert into new shares, are not included in the above-mentioned list. Moreover, investors are required to look through indices, baskets and ETFs to the extent that the composition of such instruments is publicly available or is nevertheless available to the investor (for example, because that investor had already invested in such instrument for other reasons).

34. Actively managed funds are excluded from the calculation of the net short position of the investor who participates in the fund capital. The calculation and the reporting of the net short positions of the fund are done by the fund manager.

35. The net short position has then to be divided by the issued share capital, which is composed by all classes of shares.

Findings

36. Competent authorities had a positive view of the method for calculating the net short positions. This was also the general view of those who responded to the CfE. However, some respondents highlighted a number of issues.

37. In particular, it was observed that some index providers do not publish free-of-charge information on the index composition and/or the underlying shares' weights.

38. Other respondents stated that the look-through of indices, baskets and ETFs has proven to be very burdensome and have suggested excluding such instruments from the calculation when some conditions are met (e.g. limited weight of the underlying share; cash settled or broad-based index; hedging purpose only; etc.). They argue that index instruments are used for hedging market-wide risk or to take positions on broader market movements and that it is unlikely that such index instruments are used to take relevant short position on single listed companies.

39. Other respondents observed that the data on the issued share capital is not easily available, especially with regard to preferred and saving shares, and therefore some errors in calculation might occur. Two respondents have suggested that ESMA or competent authorities should publish and maintain a list of issued share capital for all companies affected by the Regulation.

40. It has also been considered that some instruments related to shares are not included in the calculation of the net short positions, like subscription rights, actively managed funds and some convertible bonds. Therefore, if an investor has a flat net position composed of a long position in one of the

above-mentioned instruments and a short position in the related shares, he could nevertheless have to report the short leg of its position to competent authorities and to the market, when the reporting levels are reached. Some respondents have considered such information as potentially misleading for both the market and the issuers.

41. A few market participants also noted that the current approach adopted for convertible bonds (e.g. to include them in the calculation only if they convert into existing shares) has proven to be too burdensome because this type of data is not easily available.

42. Finally, it has been considered that in some cases the definition of ownership for the sake of the calculation of net short positions seems to make reference to the relevant law of the contract (i.e. pledges and collateral contracts according to Article 3 of DR No. 918/2012). However, in other situations an economic approach has seemingly been followed (i.e. stock lending agreements according to Article 2(1)(b) of the Regulation). The different treatment of contracts which can produce similar or symmetrical economic effects appears to be counter-intuitive and could leave ground for errors in the calculation of net short positions; moreover, Recital 3 of DR No. 918/2012 promotes a consistent approach across EU despite the different laws applicable in the MS.

ESMA proposal of advice

43. **As regards access to information on indices**, ESMA notes that a draft EU framework on indices is currently under discussion. Therefore, in order to allow investors to comply with their regulatory obligations under the Regulation, ESMA suggests to include in the framework on indices a rule providing for the free of charge publication of data on the index composition and weights in order to allow for the end of the day calculation of the net short position, in particular when the position or weight of the index is modified or changed. In line with the current Regulation, ESMA does not suggest that real time information needs to be provided free of charge[6].

44. **With regard to the exclusion of indices from the calculation** of net short positions in shares, ESMA considers that it should be noted that indices can be used to assume a synthetic short position on the whole market. Therefore, ESMA believes that the current rules on the look-through of indices are appropriate and no change is needed.

45. **Regarding data on issued share capital**, ESMA notes that the TD is currently under review, and that one of the regulatory options regards the creation of a centralised EU database storing all information on issuers. ESMA suggests that this centralised system could also collect information on the issued share capital to be used for the Regulation purposes.

46. **As regards taking into account positions in actively managed funds**, ESMA suggests to amend DR No. 826/2012 in order to provide investors with the possibility of flagging net short positions which are backed by long positions in actively managed funds (e.g. by introducing a new field in the notification form). DR No. 826/2012 should also be amended to provide for the publication of such information. Without challenging the method of calculation, such a technical amendment to the reporting and disclosure would provide additional and valuable information to the regulators for their monitoring activities and to the market on the actual strategies pursued by fund managers.

[6] This would be in line with the high level principle on Transparency set out in Final report on ESMA-EBA Principles for Benchmark-Setting Processes in the EU.

47. **With regard to positions in subscription rights and convertible bonds** which convert into unissued shares, ESMA considers that long positions in subscription rights and convertible bonds should remain excluded from the calculations, but recommends to amend DR No. 826/2012 so that investor have a possibility to flag such positions in their notifications and disclosures of net short positions. Without challenging the method of calculation, this technical amendment to the reporting and disclosure forms would allow for commonly used shorting strategies to be visible to competent authorities or the market; this is of particular importance when companies are raising capital and thus more likely to be subject to short selling.

48. **With regard to the definition of ownership** applicable for the purpose of calculation of net short positions, and taking into account Recital 3 of DR No. 918/2012, ESMA would welcome a clarification from the Commission regarding the treatment of contracts with similar or symmetrical economic effects, like stock lending, collateral and pledges contracts and expects the issue to be addressed in the upcoming European legislative proposals in this area.

III- III. Sovereign debt: reporting thresholds and method of calculation of net short positions

49. Investors are required to report significant net short positions in sovereign debt and sovereign CDS[7] to the relevant competent authority. The initial threshold for reporting is set at 0.1% or 0.5% of the issued debt adjusted by duration and translated in monetary amount. The applicable threshold is determined mainly by the amount of issued debt (i.e. if the total outstanding debt is smaller than 500 billion euro then the 0.1% threshold applies; if the amount is greater than 500 billion euro or if there is a liquid future market, then the 0.5% level is adopted). Further notifications are required when the position reaches incremental stages set at 50% of the initial monetary amount. The amount of debt and the relative thresholds are revised quarterly by the competent authorities and published by ESMA. Positions in sovereign debt cash instruments are adjusted by their duration, while positions held through derivatives are only required to be delta adjusted.

Findings

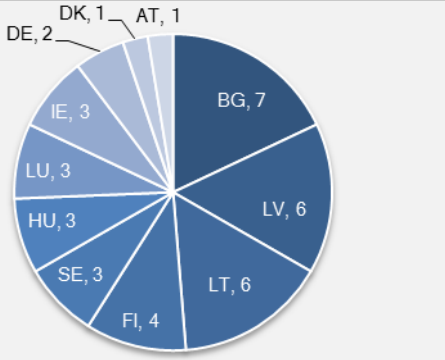
Empirical evidence on short selling notifications in sovereign debt

50. Between 1 November 2012 and 28 February 2013, there were 148 notifications made to competent authorities on 13 sovereign entities in 11 countries.

51. There were 26 holders that reported 39 short positions on which 109 modifications occurred during the period (Chart C.05).

[7] The reporting of short positions in sovereign CDS is envisaged if a competent authority removes the prohibition to enter into uncovered CDS.

Net economic short positions on EU sovereigns C.05



Note: Number of reported short positions on sovereign debt, by Reporting Competent Authority, 1/11/2012 to 28/2/2013.
Sources: National Competent Authorities, ESMA.

52. The very low number of notifications received on sovereign debt, compared to the number of notifications received on shares, might not accurately reflect the actual short-selling activity on these values. This might be due to the reporting thresholds set too high, or to the computation of duration-adjusted short positions on sovereign debts that make them hard to reach.

Feed-back from market participants and competent authorities

53. The current rules on net short positions in sovereign debt did not receive many positive views from market participants. Some respondents considered that the current reporting levels are too low for smaller countries. Others have suggested taking into account additional factors for the sake of determining the reporting thresholds. Many market participants considered that positions in cash and derivatives instruments should be treated in a consistent way (either nominal or duration adjusted). Some considered that the duration adjusted method is too complicated and therefore have expressed their favour for the nominal method. The vast majority of competent authorities shared the concerns expressed by the respondents to the consultation.

54. It should be noted that the current reporting thresholds were proposed by ESMA in its Technical Advice to the Commission on possible delegated acts (ESMA/2012/263) along with a nominal method of calculating the net short position in sovereign debt. DR No. 918/2012 has moved away from the nominal method to a duration adjusted approach without any change to the threshold levels.

55. A number of respondents did not support the quarterly frequency for adjusting the monetary trigger thresholds for reportable short positions in sovereign debt set out in the DR No. 918/2012; they suggested a longer period as there is no important change in outstanding amount over a quarter and no risk of regulatory arbitrage with longer period. This was widely supported by the competent authorities suggesting to have half yearly or yearly updates

56. A number of market participants suggested that the list of debt instruments considered in the calculation of the overall amount of the debt of the sovereign issuer should be published in order to reduce the uncertainty for the calculation of the net short position.

ESMA proposal of advice

57. ESMA shares the concerns regarding the inconsistent treatment of positions in cash (which are duration adjusted) and positions in derivatives (which are not). The duration adjusted method inevitably entails more complexity in terms of calculation of positions, as highlighted by some respondents to the consultation. But more importantly, as stated in its Technical Advice to the Commission on possible delegated acts (ESMA/2012/263), ESMA considers that while the duration adjusted method better reflects the fact that taking short positions in issues of different duration will have different market impacts and captures adequately the level of risk to changes in yields, a duration adjusted method is less useful than the nominal method in times of market stress which is when net short position reports will be most useful. Taking into account all pros and cons, ESMA considers the nominal method more appropriate for calculating net short positions in sovereign debt. The nominal method offers greater simplicity for calculation while still being very useful when the market in debt instruments is mostly led by events other than interest rate risk (e.g. credit risk or distress situation). These are also the kind of situations when the knowledge of short positions becomes more important for regulators. However, ESMA considers that, should the duration method be maintained, then positions in cash and derivatives should be treated in the same way, with positions in derivatives to be adjusted both by their delta and duration.

58. As regards the reporting thresholds on sovereign debt and sovereign CDS, ESMA notes that the current initial thresholds were set together with the nominal method of calculation. This means that, should the duration adjusted approach be maintained, then the initial thresholds would need to be revised accordingly. Moreover, ESMA recognizes that the markets of the various EU sovereign issuers have different characteristics which might not have been entirely considered in defining the initial thresholds. Therefore, ESMA believes that an adjustment to the initial thresholds could be needed even if the nominal method is implemented. In addition to the factors already specified in the current text of the Regulation, the analysis should take into account other factors such as the different level of high frequency trading and direct retail investors participation and the degree of trading activity on cash instruments which takes place on trading venues.

59. With regard to the frequency of updates of the thresholds, ESMA notices that the amounts of EU issued sovereign debt seem to remain quite stable over time for most countries. Thus, the quarterly review currently adopted incorporates little added information for regulators in their monitoring of markets compared with the cost of the updates by ESMA and the re-calculations by the holders of net short positions. Therefore, ESMA suggests moving to an annual review.

60. Moreover, ESMA considers that the list of the public entities whose debt is included in the calculation of the issued sovereign debt should be made public to provide for more clarity to the market.

III- IV. **Reporting mechanisms**

61. Investors have to report their net short positions to the competent authority of the shares or sovereign debt concerned. The reporting system has to ensure the confidentiality of information and has to incorporate mechanisms for authenticating the source of the notification. Information to be made public has to be posted on a central website operated or supervised by the relevant competent authority. Notifications are required to be made no later than 15.30 of the trading day following the trading day on which the threshold was reached. The 15.30 deadline has to be calculated according to the local time of the Member State (MS) of the relevant competent authority. The content of the information to be notified to the competent authority and to be published has been standardised across EU through DR No. 826/2012.

Findings

62. From the review of responses to the CfE, there was a strong desire for more harmonisation of reporting procedures including calls for centralisation of reporting. Many respondents have highlighted that the processes for registering with the reporting systems of the various competent authorities and for submitting notifications are different across the EU, thus creating operational difficulties, confusion and risk for data quality. The same problem has been highlighted with reference to the process for publication of data and for accessing the published information.

63. In the view of the majority of the competent authorities, many of the above-mentioned issues originate from the first application of the Regulation and therefore represent "one-off" costs which have already been borne by investors. For example, many investors have already registered to competent authorities' reporting systems and thus have already born the correspondent costs. With this in mind, the future costs of the asserted lack of harmonisation are likely to be of low magnitude. Competent authorities indicated that their reporting systems now appear to be working smoothly.

64. There is some support between a minority of competent authorities for a centralised reporting mechanism acknowledging its benefits for the market participants. However, the majority of competent authorities would prefer maintaining current arrangements, noting that a centralised EU-wide reporting mechanism could potentially make national monitoring and enforcement more difficult and less effective, as competent authorities would need real-time information on net short positions to carry out their supervisory duties. Moreover, many competent authorities publish a wide array of information regarding issuers (e.g. major shareholding participations, buy back operations, etc.), thus moving the publication of net short positions to an EU website could lead to a fragmentation of information. It was also argued that competent authorities are usually in a better position to solve the inevitable errors and questions that arise on a daily basis. Finally, re-designing and implementing a centralised EU-wide system would make redundant the costs and resources already incurred at national level and would generate new costs (e.g. IT costs for creating the new system and re-engineering the existing technical interfaces between industry and the central reporting system; new compliance costs for registering and learning the notification process).

65. Another common issue regards the 15.30 local time deadline, which many respondents to the CfE have considered too challenging, especially when the investors are located outside the EU (in a time zone at least 6 hours ahead/behind of CET) which is the case for almost half of the notifications received by competent authorities. Some also noted that disclosing significant net short positions during the trading session might have an impact on trading activity. Several respondents proposed to set the notification and disclosure deadline at the end of the day.

ESMA proposal of advice

66. Considering the risk of fragmentation of information about an issuer, the costs associated both for investors and regulators with the redesigning of IT systems and the resources implications for regulators with a reporting time delayed to the end of the day, ESMA recommends no change to the Regulation and its implementing text neither in relation to the reporting mechanisms nor with respect to the 15.30 local time limit for submitting notifications.

IV. Restrictions on uncovered short selling of shares and sovereign debt

Extract from the Commission's request

ESMA is asked to consider whether and to what extent the beneficial impacts of short selling for volatility and price formation during normal times have been impacted by… restrictions on uncovered short selling…. ESMA's statistical analysis would include:

An analysis of the impact on securities lending behaviour provided that the data are available;

An analysis of the impact on settlement discipline.

67. The Regulation provides that parties can only enter into a short sale of a share or sovereign debt instrument where certain specified conditions have been met. Uncovered short selling may increase the potential risk of settlement failure and volatility and the purpose of the restrictions on this activity is to reduce such risks. Before conducting a short sale the person needs either:

    a. to have borrowed the share or sovereign debt; or

    b. to have entered into an agreement to borrow it or have another absolutely enforceable claim so that settlement can be effected when due; or

    c. in the case of shares, to have an arrangement with a third party (i.e. a separate natural or legal person) which has confirmed the share has been located and has taken measures so that the person has a reasonable expectation that settlement can be effected when it is due. In the case of sovereign debt, the requirement is either to have an arrangement with a third party which has confirmed the sovereign debt has been located or that the third party otherwise has a reasonable expectation that settlement can be effected when it is due.

68. The implementing technical standards to the Regulation elaborate on the second and third conditions above. They provide examples of the types of agreement and enforceable claim necessary to ensure that settlement can be effected when it is due. As regards arrangements with third parties, for shares the standard requirements are that the third party has confirmed that it considers it can make the shares available for settlement in due time, taking into account amount and market conditions (the 'locate confirmation'), and has confirmed that it has at least put on hold the requested number of shares for the person. However, where the short sale involves a liquid share (essentially a MiFID liquid share) or an arrangement is needed only for intra-day transactions, the requirements are to obtain a locate confirmation plus confirmation that the share is easy to borrow or purchase in the relevant quantity taking into account market conditions. For sovereign debt, the implementing technical standards set out the various types of arrangements and confirmations necessary to provide reasonable expectation that settlement can be effected when due.

69. Where the relevant confirmations cannot be provided, it is necessary to meet a more stringent condition if the short sale is to be entered into. The implementing technical standards also specify the types of third party with whom an arrangement can be made.

70. In pursuing this aspect of its mandate ESMA carried out a quantitative analysis of the impact of the Short Selling Regulation both on the securities lending market and on settlement fails. In addition, ESMA posed various questions to market participants and competent authorities concerning these issues and also on some specific related questions such as the effect on the locate rule requirement and possible changes to the conditions for entering into a short sale.

Findings

Quantitative analysis on the impact on securities lending

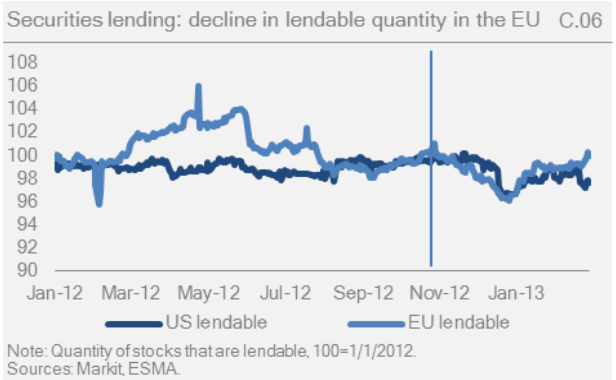
71. In its quantitative analysis of the impact of the Regulation on securities lending ESMA compared the number of stocks on loan in the EU and US during 2012 and the first part of 2013. It also analysed the change in quantities of stocks in the EU classified as 'easy to borrow' (MiFID liquid stocks, constituents of the main equity index in each EU country and stocks which are the underlying of derivatives) since the coming into application of the Regulation. This analysis was intended to test the hypothesis that the imposition of a mandatory 'locate rule' could hamper securities lending activity, especially for not easy to borrow stocks that are subject to put on hold restrictions. Therefore it was assumed that after the Regulation went into force in November 2012 i) securities lending activity on illiquid stock would decline ii) activity on stocks easy to borrow would also decline, but at a slower pace given that constraints are less stringent (no requirement to put on hold). In any case, it has to be noted that regulatory data about securities lending is non-existent, so all the analysis had to be done based on commercial data that might not be comprehensive enough.

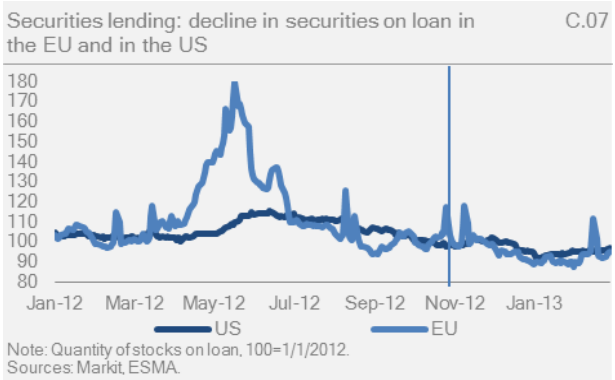
72. Regarding the impact of the 'locate rule', empirical evidence shows that activity in securities lending markets has been lower since the entry into force of the Regulation, compared to the previous period (Charts C.06 and C.07). In particular, there has been a significant reduction in lendable quantities and quantities on loan compared to the control group (US) as evidenced by the results of a difference-in-difference estimation[8], even though since January 2013 lendable quantities seem to recover. The effect has been more pronounced for stocks that are not in the main equity indices, which can be explained by more stringent locate rules (such as the put on hold obligation). These conclusions are valid for all the countries in the sample (AT, BE, DE, DK, ES, FI, FR, HL, IE, IT, NL, NO, PT, SE, UK) as well as at the EU level as a whole.

73. Results were mixed on the impact of the Regulation on the utilisation rate, i.e. the ratio of quantities on loan to lendable quantities. For stocks used as proxies for the 'not easy to borrow' category, the utilisation rate increased in some countries but decreased in others, with a small positive impact at the aggregate EU level. For more liquid stocks, utilisation increased in most countries, with only a few exceptions. Contrary to expectations, the effect was more pronounced for liquid stocks that less liquid ones.

74. Overall, the empirical evidence shows that the entry into force of the Regulation was followed by a decline in quantities available for loans on securities lending market (though it has recovered since January 2013), and in quantities on loan for all countries in the sample. However, while it was expected that the utilisation rate should increase after the entry into force of the Regulation, given the relative scarcity of lendable stocks, the empirical evidence is mixed.

[8] See Annex. One of the limitations of this approach is the absence of control variables.





Quantitative analysis on the impact on settlement fails

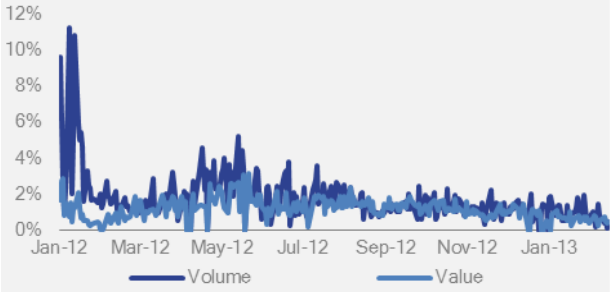
75. According to the Regulation, the locate rule should improve settlement discipline and therefore lead to a decrease in settlement fails on EU equities. As indicated in Chart C.08, settlement fails seem to have decreased since the entry into force of the Regulation[9].

76. The hypothesis is that if the Regulation had no impact, then the pre and post Regulation data on settlement fails should be on average equal. Based on the value of settlement fails significant differences were observed in most countries and at the EU level (Table T.01). For the EU as a whole and for around half of the EU countries there were fewer settlement fails both in terms of volume and value after the entry into force into of the Regulation, while for five countries there was no significant change in terms of volumes, and for two countries there were more settlement fails after the Regulation.

77. Overall the empirical evidence shows that for around half of the countries, there were fewer settlement fails after the Regulation while for the others there were no significant changes, with the exception of two countries. Therefore, the Regulation was followed by an increase in settlement discipline.

[9] However, the series shown in the chart refers to the median value of settlement fails which may not be entirely reliable due to significant differences surrounding the definition of settlement fails among countries. Moreover, no control variables were used in the estimation.

Settlement fails have decreased since the Regulation C.08



Note: % of settlement fails on European equities based on volumes and value.
Sources: Competent Auhtorities, ESMA.

Average settlement fails before and after the entry into force of the Regulation T.01

Area	Before	After	T-stat	Significant difference
EU (median), % of value	2.0%	1.0%	5.64***	YES
EU (median), % of volumes	1.3%	0.8%	7.73***	YES

Note: *** indicates that the parameter is significant at the 1% level.
Sample period is from 1/1/2012 to 15/02/2013.
Sources: National Competent Authorities, ESMA.

Feed-back from market participants and competent authorities

78. While the competent authorities surveyed did not think there had been much change in the behaviour of investors as a result of the implementation of restrictions on short sales, market participants did generally see some impact and their views on the effects were broadly in line with ESMA's findings. Thus the majority of respondents to the CfE on this topic said they had noticed improvements in settlement performance, although not necessarily in all types of shares, and some suggested that the improved performance might have been at the expense of efficient price formation and liquidity. On the other hand, few views were expressed on whether the restrictions had reduced the risks of volatility and downward spirals in prices.

79. The opinion of market participants was more evenly split on the question of impact on the cost or availability of securities lending. Some reported little or no observed effect, while others (including some securities lenders) commented that more conservative approaches to stock lending had been adopted – e.g. smaller sizes of loan offered and shorter lending periods. A number of respondents also thought that lending costs, particularly for less liquid/small cap stocks, either had increased or were expected to do so soon.

80. The majority of respondents who expressed a view were of the opinion that the 'locate rule' had some adverse impacts like increasing the costs and burdens for firms operating in the relevant markets, causing a reduction in client activity and generating increased pressure on the lending market. In this context the requirement to use a different legal entity to obtain the locate and other necessary confirmations was cited as being a particular problem. It was seen as leading to increased costs and complexity and having a negative effect on the liquidity of lending markets. It was suggested that the definition of third party should be revisited to allow lending desks within the same legal entity to be able to provide locate confirmations subject to proper ring-fencing. There were various other proposals to change or relax the requirements to obtain a locate confirmation before undertaking a short sale – for example to allow intra-day short selling of shares without restrictions provided that the transactions are covered by the end of that trading day.

81. On a separate but related issue, some market participants considered that the liquidity of the securities lending market was not properly taken into account in the current definition of liquid share.

ESMA proposal of advice

82. It seems clear that the introduction of the restrictions on uncovered short selling had a noticeable impact in reducing the incidence of settlement failures in share transactions. This was one of the outcomes sought by the Regulation and the restrictions are therefore having their intended effect here. However, there is also some evidence that the improvement in settlement discipline may have been achieved at some costs for the securities lending market and those using it.

83. ESMA is of the view that no substantial changes to the requirements in this area are warranted at this stage. So it would not recommend, for example, removing the conditions for undertaking intra-day short selling. However, ESMA does consider that some of the details of the current arrangements should be revised. In particular, ESMA proposes that a change to Articles 12 and 13 of the Regulation be made to enable short sellers to obtain the confirmations necessary to undertake a short sale from parties within the same legal entity provided that those parties meet the necessary conditions. ESMA considers that there is no intrinsic reason why the ability to obtain confirmations from such parties should pose an increased risk to settlement discipline than requiring the seller to go to a different legal entity for this purpose.

84. However, as well as meeting all the existing requirements set out in Article 8 of Commission Implementing Regulation (EU) No. 827/2012, in cases where a securities lending desk is situated within the same legal entity as the person seeking to undertake the short sale, it should also be a condition that the lending desk and the trading desk(s) are segregated and operate at an arms-length basis from each other. It was suggested that such a ring-fencing of internal lending desk activities of a firm could be evidenced by system access controls, pricing and segregation of back and middle office functions. ESMA agrees that, on this basis, internal locate arrangements should be allowed and considers that this refinement to the Regulation would help mitigate the constraints on and costs of securities lending activities without adversely affecting the operation of the restrictions on uncovered short selling.

85. ESMA also recognises that, as regards the detailed measures to ensure a reasonable expectation that settlement can be effected when it is due, the definition of 'liquid share' in Article 6 (4) of Commission Implementing Regulation (EU) No. 827/2012 primarily focuses on the liquidity of the share for buying and selling purposes and does not take into account the ease with which borrowing of the share can take place. ESMA considers this issue might be revisited when possible but notes that currently the lack of regulatory data on securities lending transactions, their prices and the availability of shares for borrowing precludes this. This is therefore a topic which should be revisited when such data become available.

V. Settlement discipline including buy-in procedures

86. Article 15 of the Regulation specifies that central counterparties for clearing shares must ensure that, where a person who sells shares is not able to deliver them for settlement within 4 business days following the date when settlement is due, procedures are automatically triggered for the buy-in of the shares to ensure settlement. Where buy-in of the shares is not possible, the buyer of the shares must be paid an amount based on the value of the shares to be delivered plus an amount for losses incurred due to the settlement failure. The Regulation also provides that such central counterparties shall ensure that, where a person who sells shares fails to deliver them by the due settlement date, the person must make daily payments for each day that the settlement failure continues. The purpose of the requirements is to set basic standards relating to settlement discipline for shares.

87. Though there was no explicit question in the mandate, ESMA considers important and necessary to analyse the effect of Article 15 procedures as their aim is to improve settlement discipline. Therefore, both market participants and competent authorities were surveyed on this issue.

Findings

88. Overall, the respondents to the CfE experienced some improvements in settlement discipline in shares since the application of the Regulation, and some expect to see continued improvement in the future.

89. Many respondents did not observe any particular effect on the liquidity of shares. Other highlighted that shares that are hard to borrow or the share of small and mid-cap issuers have experienced a lower level of liquidity, arguing on the inappropriateness for less liquid shares of the "one size fit all approach" to settlement discipline in the Regulation and on the absence of exemption for market makers which are thus less inclined to provide liquidity due to the exposure to buy-in procedures and daily fines in case of settlement fails.

90. On the basis of data provided by 15 competent authorities from countries where buy-in procedures were in place (at CCP or CSD level) prior to 1 November 2012, a mixed situation can be observed. Overall, the number of buy-ins or buy-in attempts across Europe has increased by 35% since Regulation applied[10]. However, this mainly results from the large increase in shares buy-ins executed in a particular European country which accounts for 60% to 75% of the overall number of buy-ins in the EU, whereas in most of the other countries, the number of buy-ins executed or of buy-in attempts has decreased after the Regulation applied.

91. A number of respondents also expressed concerns about the current lack of harmonisation of settlement penalties across the EU (in terms of methods and levels) and the associated risks of arbitrage as well as the limits of the buy-in procedures in the Regulation which only cover shares and apply only to centrally cleared transaction, leaving thus aside OTC transactions and on exchange transactions that are not cleared by a CCP, which in some countries represents a substantial part of the trading activity. In addition, the risk of inconsistencies and rising overall cost of settlement if the CSD Regulation creates additional settlement penalty regime on top of the penalty regime set out by the Regulation was pointed out. Several competent authorities also supported this view.

ESMA proposal of advice

92. The Regulation is the first experience of EU-wide mandatory requirements on buy-in procedures and penalties for settlement discipline purpose. Considering on the one hand the limitation to transactions in shares that are cleared by a CCP and on the other hand the fact that these requirements cover more than the settlement fails resulting from short selling, ESMA is of the view that the settlement discipline requirements, notably the buy-in procedures, could be better and more extensively dealt with if there were included in a single piece of regulation. As the Regulation acknowledged in Recital 23, it was essential to address wider aspects of settlement discipline in a horizontal legislative proposal. This has now been given effect in the proposed CSD Regulation. ESMA's view is that the forthcoming CSD Regulation provides a more efficient tool to set out a more detailed re-

[10] Comparing 2-month periods prior and after 1 November

gime and to ensure a level playing field in the application of the buy-in and settlement penalties procedures while catering for the particular case of illiquid shares and SMEs shares.

VI. Restrictions on uncovered sovereign CDS transactions

Extract from the Commission's request

ESMA is asked to consider whether and to what extent the ban on naked sovereign CDS has had any effects in terms of market prices and of volatility of sovereign debt markets or investment by affecting the scope for hedging. In addition ESMA would conduct a representative survey of market participants in order to answer the question whether and to what extent the Regulation has affected non-financial actors, notably their need to hedge.

93. The Regulation prohibits the entry by a natural or legal person into an uncovered sovereign CDS position. The rationale is that entering into a sovereign CDS without underlying exposure to the risk of a decline in the value of the sovereign debt could have an adverse impact on the stability of sovereign debt markets. An uncovered position is defined as one where the sovereign CDS does not serve to hedge against:

    a. the risk of a default by the sovereign in whose debt the person has a long position and to which the sovereign CDS relates; or

    b. the risk of a decline of the value of the sovereign debt where the person holds assets or is subject to liabilities whose value is correlated to the value of the sovereign debt.

94. Detailed provisions on what is eligible to be considered as a covered sovereign CDS position are set out in Commission Delegated Regulation No 918/2012. This sets out alternative quantitative and qualitative tests for determining whether the assets/liabilities are correlated to the value of the sovereign debt including cases where correlation can be deemed to exist.

95. It also lays down the requirement for the size of the sovereign CDS position to be proportionate to the size of the exposures being hedged but specifies circumstances in which holding a greater value of sovereign CDS can be warranted or where it would otherwise not affect the covered status of the position. The Delegated Regulation also sets out a limited number of cases where it is permissible to use a sovereign CDS referenced to one MS or another sovereign issuer in that MS to hedge an asset/liability in a different MS or where use of a pan-EU or euro area index of sovereign CDS would be permitted. Finally, the Delegated Regulation sets out how to calculate whether a sovereign CDS position is or is not uncovered, distinguishing between dynamic and static hedging strategies.

96. The Regulation also provides that a competent authority may temporarily suspend the restrictions on an uncovered sovereign CDS position in the sovereign issuer for which it is the competent authority where it has grounds for believing that its sovereign debt market is not functioning properly and the restrictions might be having a negative impact on the sovereign CDS market. So far no competent authority has made use of this provision.

97. ESMA carried out statistical analyses of the effect of the ban on uncovered sovereign CDS transactions on sovereign CDS spreads. ESMA also sought evidence from and the views of competent authorities and market participants on the questions posed by the Commission.

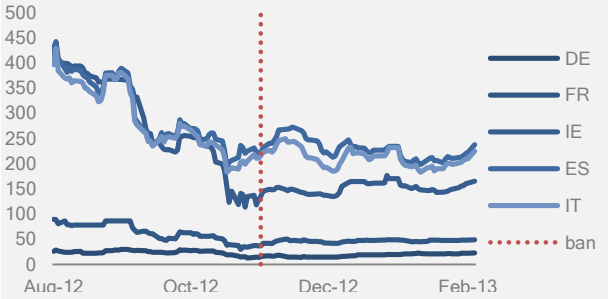
Findings

98. For its statistical analysis ESMA examined sovereign CDS spreads for 20 EU MS before and after the application of the Regulation. It sought to control for the impact of non-regulatory market developments by comparing these against spreads in a control group of non-EU OECD countries. As the following table shows there was a slight decrease in EU MS sovereign CDS spreads after the introduction of the prohibition on uncovered sovereign CDS transactions. This period did, of course, see a general easing of financial tensions within the euro-area.

Quantitative analysis on the impact on sovereign CDS

99. The effect of the uncovered CDS ban on sovereign borrowing conditions was quantitatively assessed through two channels, an indirect one on CDS spreads and a direct one on the sovereign bond yields. This effect was isolated following a difference-in-differences estimation procedure.

Decrease in CDS spreads after the introduction of the ban C.09



Note: 5 years CDS on EU sovereigns
Sources: Thomson Reuters Datastream, ESMA calculations

Effect of the introduction of the ban T.02

	Coefficient	P-value	Significant
CDS spreads	-26.585*	0.075	Yes
10Y yields	-0.069	0.567	No

Note: diff-in-diff estimator, controlling for debt to GDP ratio, national stock market indices and retail sales indices. * indicates that the parameter is significant at the 10% level.
Sources: Thomson Reuters Eikon, Thomson Reuters Datastream, ESMA.

100. On the five-year sovereign CDS markets, a slight decrease in spreads could be observed for EU countries after the introduction of the ban, in comparison to non-EU countries. To isolate the effect of the Regulation, we picked three variables, to control for external factors, with significant effects on the spreads: the debt-to-GDP ratio as a proxy for the solvency risk of the country; domestic stock market indices as proxies for domestic financial market developments; and a business sector activity indicator, namely business sales. Taking this into account, the effect of the ban is found to be a slight reduction of around 26 basis points in the CDS spread of countries subject to the Regulation (only significant at the 10% confidence level).

101. On ten-year sovereign bond yields, a slight structural break can be observed at the date of entry into force of the Regulation. Yet, this effect disappears when external market developments are controlled for. The introduction of the ban thus does not seem to have had a statistically significant effect on EU sovereign yields.

102. The volumes of net notional European CDS outstanding have sharply declined since August 2011, much earlier than the entry into force of the Regulation. However, liquidity, as measured by bid-ask spreads, does not seem to have been significantly impaired by the Regulation[11], and gross notionals have continued to increase after the entry into force of the regulation. As a whole, the entry into force of the Regulation did not seem to have had a compelling impact on the activity in the sovereign

[11] A detailed analysis of the impact of the Regulation on the activity and the liquidity of the CDS market is presented in Annex II.

CDS market, with the exception of sovereign CDS indices, for which a sharp decline was observed. It should also be noted that this period saw a general easing of financial tensions within the euro-area.

103. Looking at the average number of trades per day and per reference entity, as well as the average notional amount traded per day and per reference entity, there was no observable drop following the entry into force of the Regulation with the exception of a few EU members from Eastern Europe, thus questioning the view that the ban has heavily reduced the single-name CDS market activity.

104. Finally, ESMA notes that the April 2013 IMF Global Financial Stability Report provided an analysis of the role of sovereign CDS. The IMF indicated that the evidence overall does not support the need to ban purchases of naked CDS protection and that such bans may reduce CDS market liquidity to the point where these instruments are less effective than hedges and less useful as market-implied credit risk. The IMF noted that in the wake of the EU ban sovereign CDS market liquidity already seems to be tailing off, although the effects of the ban are hard to distinguish from the influence of other events that have reduced perceived sovereign credit risk.

Feed-back from market participants and competent authorities

105. Competent authorities had not seen any particular effect on the market for their respective domestic sovereign debt since the application of the Regulation. Nor had any come across any adverse impact on the hedging capacity of non-financial actors though many noted that they had not undertaken any surveys in this area and that in any event there was only a very short period of experience of the effect of the Regulation on which to base judgements.

106. Those market participants who responded on this topic of restriction on uncovered sovereign CDS were able to provide more data, particularly on the effect on sovereign CDS markets themselves. There was a general consensus that there had been a marked decrease in the level of activity in these markets. It was commented that with liquidity in the smaller sovereign CDS markets (such as Eastern European countries) having dried up completely, although this is not entirely perceivable in the empirical evidence described in the previous section. In addition, they claimed that the liquidity of the main European sovereign CDS index (the iTraxx SovX Western European Index) had been particularly badly affected, with one respondent stating that it was now effectively no longer traded.

107. A number of respondents to the CfE also reported a lower ability for market participants to hedge risks and exposures with sovereign CDS. The view was that some participants had stopped trading in sovereign CDS due to uncertainties regarding the regime introduced by the Regulation and/or the fact that hedging through sovereign CDS was now more cumbersome and costly. The general observation from the respondents to the CfE was that hedging exposures had now shifted more to futures/options or cash markets or, in some cases, corporate CDS, although no quantitative data was provided on this issue.

108. There was less of a consensus of view on the impact on EU sovereign bond markets. Some respondents considered that there had not been any impact on price or volatility, although it was noted that the short time period since the application of the Regulation and the generally improved market sentiment towards the euro-area made it difficult to assess the effect. One or two respondents said they had seen reduced volatility or improved sovereign debt prices since November 2012 but others pointed to increased volatility in certain sovereign debt instruments at subsequent points of heightened stress for a particular sovereign. Some market participants also commented that liquidity in sovereign debt markets had become more difficult to source since the application of the

Regulation and said that there had been significantly reduced participation in the EU bond markets on the part of some categories of investors, notably from third countries.

109. The main factors in the sovereign CDS regime cited by market participants as being especially problematic for their continued use as a hedge for risks/exposures were as follows:

    a. The restrictive nature of the correlation tests (with the emphasis on historical data) and uncertainty over whether the quantitative and qualitative tests were alternatives or to be used in combination;

    b. The limitation on the geographic scope of sovereign CDS hedges which precluded their use for legitimate cross-border risk management purposes. The circumstances in which cross-border hedging was allowed were thought to be too narrow. The inability to use a sovereign CDS index unless the exposure related to all sovereigns in the index or an appropriate supra-national issuer was thought to be particular problem preventing the use of such indices to hedge risks in several MSs;

    c. The inability to do the calculations as to whether a sovereign CDS position was covered at the level of a group rather than at individual legal entity level. This discriminated against groups of companies which used a dedicated entity to hedge the risks for the rest of the group.

110. Two other areas were also cited as ones in which clarifications or technical amendments to relevant provisions in Commission Delegated Regulation (EU) No 918/2012 would help the market. The first concerned the question of whether uncovered sovereign CDS positions entered into before the coming into force of the Regulation could be novated (i.e. transferred to a different party) and held until the maturity date of the CDS contract. It was argued that there was no increase in the market or systemic risk resulting from this process while it did enable parties to manage their counterparty and credit risk. Currently it was not clear whether this was permitted. The second related to various wording modifications to the relevant articles of the Delegated Regulation where the meaning of the text could be improved by using more precise or appropriate terms. For example, the term 'referenced sovereign debt' currently appears in various articles. However, it was noted that a sovereign CDS will typically not reference any specific debt obligation of the MS. Thus a better term would be 'obligations of the sovereign which are within the scope of the CDS'.

ESMA proposal of advice

111. The restrictions on uncovered sovereign CDS transactions seem to have had no compelling impact on the liquidity of EU single name CDS markets with the exception of a few eastern-European countries. While ESMA recognises that the more general developments in the external financial environment have had also an influence on sovereign CDS markets as a whole, it seems unlikely that all the changes can be attributed solely to these. For example, they would not explain the much reduced liquidity in European sovereign CDS indices since the application of the Regulation. On the other hand, the effect of the restrictions on EU sovereign debt markets is less obvious, although the more benign conditions in the euro area prevailing need to be taken into account in making an assessment.

112. ESMA does not see compelling evidence warranting major changes to the provisions of the Regulation dealing with sovereign CDS at this stage noting that it may be too early to draw firm conclu-

sions in this area. So far, there does not seem to have been a noticeable adverse effect on EU sovereign debt markets themselves. However, there has been a decline in activity for sovereign CDS in a few EU countries and sovereign CDS indices. There is, therefore, a need to keep this area under close review in the light of longer experience with the effects of the Regulation. Importantly, the ability of individual MSs to lift temporarily the restrictions in the event of a serious effect on the liquidity of their sovereign debt markets remains a valuable safety valve here and no MS has so far felt the need to use it.

113. However, on the basis of the experience with the operation of the restriction, ESMA is of the view that some refinements to the details of sovereign CDS provisions should be pursued.

114. First, given that there does seem to be confusion among market participants over the quantitative and qualitative correlation tests, it would be helpful to clarify that these are separate alternatives rather than to be applied in combination. This might be done in a Q&A but amendment to the text of Article 18 in DR No. 918/2012 should also be considered for greater legal certainty.

115. Second, given that the Regulation has had a severe impact on the trading of relevant sovereign CDS indices involving EU MSs, ESMA considers that the current conditions for using such indices may be too restrictive and be preventing their use for legitimate hedging purposes. Currently the exposure must be a pan-EU or pan-euro-area one in order to be eligible for hedging via an index. This would preclude their use for general EU risks which did not include all MSs in the index. There would need to be safeguards to ensure sovereign CDS indices were not used to circumvent the restrictions on uncovered CDS transactions but some relaxation of the conditions for their use should be considered. ESMA could be remitted to do more work in this area with a view to providing more detailed advice on amendments to DR No. 918/2012. Separately, where the sovereign CDS market for some individual MSs has effectively and significantly been affected since the application of the Regulation, ESMA suggests that cross-border hedging should be allowed in these circumstances. Exposures to entities in MSs where the sovereign CDS market is non-existent or very illiquid may be hedged using CDS positions referenced to other MSs whose debt is correlated.

116. Third, ESMA considers that it is reasonable to conduct calculations as to whether a sovereign CDS position is a covered one at the level of a group rather than at individual legal entity level only when a dedicated entity within that group is tasked with the hedging the exposures of other entities within the group. The principle that a sovereign CDS transaction should not be uncovered would still be respected but this change would cater for circumstances where groups chose to specialise certain activities within particular entities.

117. On the more technical issues raised by respondents, ESMA asks the Commission for an interpretation of whether the Regulation allows for sovereign CDS positions entered into before the Regulation came into force can be novated without infringing the prohibition. ESMA recognises that, if such contracts were to be 'grandfathered', conditions must apply to ensure that the prohibition on uncovered transactions was not being circumvented (e.g. that the duration and amount of the contract should not be extended). As regards the proposals for changes to the terms used in various articles of DR No. 918/2012, ESMA agrees that these should be considered if and when amendments to this Delegated Regulation are being made. ESMA could be given a mandate to provide advice in these circumstances. Consistency and precision in terminology will provide market participants with greater clarity and legal certainty as to the operation of the restrictions.

VII. Exemptions – List of exempted shares – and separation between EU and non EU-shares ("negative-list") by competent authorities

118. Although there was no explicit question in the mandate, ESMA considered important and essential to analyse the operation of the exemption under Article 16 of the Regulation since the list of exempted shares is publicly disclosed. ESMA reviewed whether current arrangements for exempting third country shares are efficient and appropriate.

119. According to Article 16, the prohibiting provisions for uncovered short sales in shares as well as the transparency provisions for net short positions in shares only apply to shares having their principal venue for trading within the EU and not for shares where the principal venue is located in a third country. The relevant competent authority for shares of a company that are traded on a trading venue in the Union and also on a venue located in a third country shall determine, at least every two years, whether the principal venue for the trading of those shares is located in a third country. On the ESMA-website a list of such exempted shares is published.

120. ESMA posed various questions to competent authorities concerning the separation between EU-shares and non-EU-shares. They were asked if this separation works appropriately, if there were alternatives to the list of exempted shares ("negative-list") and if the competent authorities had implementation problems with Article 16. Competent authorities were also asked, if they have found any cases of circumvention of the requirements of the Regulation.

Findings

121. A vast majority of the competent authorities responded to the survey though some did not provide input to all the above mentioned issues, usually due to insufficient experience, mostly because they are responsible for no or only a low number of shares of non-EU-issuers.

122. None of the competent authorities reported having found any cases where parties have tried to circumvent the requirements of the Regulation.

On the negative list approach

123. The answers of the competent authorities illustrate that the issue of the "negative-list" has a different impact on the competent authorities. Whereas the majority of competent authorities has no problems and almost one third has no clear view on this issue, essentially because they are responsible for no or only a low number of shares of non-EU-issuers, one competent authority has major difficulties with the implementation and the data maintenance because of the large number of shares of non-EU-issuers it is responsible for regarding Article 16. Another competent authority noted that some investors mentioned that the list is incomplete and might also benefit from some formatting improvement.

124. For a few competent authorities, the implementation of the list was very burdensome and there are problems on how to monitor the exempted shares and how and when to update the "negative-list". In particular one of them commented that it had large implementation-difficulties due to the high number of potentially relevant shares in its markets (approximately 16.000 shares) and indicated that the cost for the evaluation of the list is too high (estimated as EUR 160.000 for the initial establishment and up to approximately EUR 90.000 per year for the updating). It said that there are no data for all relevant shares available and also commented along with another competent au-

thority that the figures from data providers are not fully reliable thus material inaccuracies cannot be avoided.

125. That competent authority also commented that the turnover data of trading venues are not reliable per se. This has created problems in particular for new issued shares for which no turnover data are reliable impeding thus to define the relevant trading venue for those shares. Investors and market makers regularly address questions if these shares are covered by the Regulation or not.

126. Another competent authority said the large number and high volume of instruments traded in its country leads to duplications with other MSs. This caused difficulties, especially where the date of admittance was problematic to confirm. Furthermore it observed that judging liquidity levels by platform also caused difficulties as trading on multiple venues might result in the stock being principally traded in a MS without it being obvious.

127. Most of the surveyed competent authorities did not see a preferable alternative to the "negative-list". However, a couple of competent authorities would favour the setting-up of a "positive-list" (a list of shares to which the Regulation applies) and one of them has implemented, nationally, such a "positive-list" in its net short position reporting system. In addition, it was suggested that the "negative-list" could be updated more frequently and another that in the future maybe the list of the reportable instruments under MiFIR could be useful.

128. In the CfE on the evaluation of the Regulation which was directed to market participants the question if the "negative-list" is appropriate was not directly addressed. Nevertheless, some respondents commented on this issue. Especially regarding market making topics respondents suggested that a dynamic update of the "negative-list", e.g. on a quarterly basis, should be implemented to allow market makers to react immediately to changes. One participant asked for a positive list of shares covered by the Regulation notifications to be published and maintained by ESMA.

On the definition of the scope

129. A number of competent authorities explicitly indicated that that the separation between EU and non EU-shares according to Article 16 of the Regulation works appropriately, with one noting that the extraterritorial effect of the Regulation is appropriate, as non-EU-shares are only included if the principal trading venue of these shares is inside and not outside the EU, because there is no justification in applying the regime to shares which are essentially non-EU.

130. However one competent authority indicated that the method of separation is inappropriate and made a concrete proposal for an alternative approach by modifying the definition of exempted shares: the rules of the Regulation shall apply to all shares of companies domiciled in the EU and shall not apply to shares of companies domiciled outside the EU, unless the shares are exclusively admitted to trading on a regulated market within the EU.

ESMA proposal of advice

131. The implementation of the "negative-list" is for some competent authorities very burdensome and costly. Turnover data are not available for all shares concerned. Also the maintenance of the data by means of turnover is not possible, because there are no turnover data available for new issued shares. Furthermore turnover data of trading venues are not reliable per se.

132. Against this background, ESMA suggests that one solution might be to adjust the scope of application of Article 16 of the Regulation. The provisions of the Regulation shall apply to all shares of companies domiciled in the EU but shall not apply to shares of companies domiciled outside the EU, unless the issuer itself has requested admission on a European trading venue. Consequently, only shares for which the inclusion in exchange-trading was applied for by third parties would not fall under the scope of application of the Regulation. In addition, the competent authorities should be empowered to require from the trading venues under their competence the necessary information about the domicile of the issuer of the shares and the person that has requested the admission to trading.

133. Such an approach would facilitate the implementation of the requirement to set up a list of exempted shares notably by avoiding turnover calculations while ensuring that the aim of the Regulation that is to protect the EU-market, its issuers and investors is fulfilled. Only where a non-EU issuer has requested admission to trading on an EU trading venue, it could benefit from the protection resulting from the European short selling regime as it can be assumed that that issuer has agreed to its shares being covered by the provisions of the Regulation.

134. Besides, ESMA is not in favour of setting up of a positive list of the shares subject to the Regulation instead of the current approach of having a negative list. The risk that an instrument would not be included in such a positive whereas it should have been is considered much greater than the risk of an instrument not being included in a negative list. In the former situation, the instrument would be capture by the requirement of the Regulation whereas in the latter case, the instrument would be de facto subject to the Regulation provision, at least till its inclusion in the negative list. In addition, an important and necessary pre-condition to the setting up of such a positive list, which would need to be maintained in real time, is that there should be strong and adequate requirements on data providers/trading venues so that information on shares is provided and maintained in an appropriate, effective and timely manner.

VIII. Exemption for market makers

Extract from the Commission's request

ESMA would conduct a representative survey of market participants and competent authorities in order to answer the following question[s]:

> *Whether the exemption for market makers allows for liquidity provision without undue circumvention*

135. One of the exemptions in the Regulation provides that the requirements concerning notification or disclosure of significant net short positions in shares and sovereign debt, and the restrictions on uncovered short sales in shares or sovereign debt or on uncovered sovereign credit default swaps do not apply to transactions performed in the course of market making activities. The rationale for this exemption is that market making activities play a crucial role in providing liquidity to markets within the EU and market makers need to take short positions to perform that role. Imposing requirements on such activities could severely inhibit market makers' ability to provide liquidity and have a significant adverse impact on the efficiency of EU markets. Market making activities are defined in the Regulation and this has been supplemented by guidelines drawn up by ESMA (ES-

MA/2013/158). Market making activity is determined on a financial instrument by financial instrument basis and subject to various conditions, including a requirement for membership of the trading venue on which the instrument is admitted to trading.

136. Those wishing to use the exemption must notify their home competent authority in advance and the authority then may prohibit use of the exemption within 30 calendar days of the notification or subsequently if the conditions for the exemption are no longer met. The exemption is available for market making activities in third countries providing the other conditions are met and that the Commission has decided that the legal and supervisory framework of the country complies with legally binding requirements equivalent to those laid down by MiFID concerning regulated markets and by the Market Abuse and Transparency Directives. So far the Commission has not adopted any such decisions.

137. ESMA posed various questions to market participants and competent authorities concerning the current definition and scope for the exemption for market making activities and the process for obtaining the exemption. ESMA also sought the views of market participants on the impact of the current availability of the exemption for market making activities in third country markets.

Findings

138. Many respondents noted that the final version of ESMA's Guidelines on the Market Maker Exemption had only appeared during the course of the review of the Regulation and were still not yet in force. It was also so far unclear whether all competent authorities would comply in full with the Guidelines and some respondents were concerned with potential uneven level playing field. Hence so far there was no experience or evidence of the impact of the approach towards the market maker exemption set out in the Guidelines.

139. None of the competent authorities had so far seen any evidence of attempts by market participants either to abuse the exemption or make inappropriate reliance on the exemption, although one authority noted that, since the Guidelines were not available in the run-up to 1 November 2012 when most notifications were submitted, some market participants had asked for exemptions for activities which were out of scope in terms of the final version of the Guidelines.

140. The majority of competent authorities considered that the arrangements for market makers set out in the Regulation and the Guidelines would allow liquidity provision without permitting circumvention. However, some thought that the arrangements were leading or could lead to a decline of liquidity provision.

141. While some trading venues thought the current definition and scope of the market maker exemption was sufficient, the majority of market participants responding to the CfE considered, in line with the concerns raised by some competent authorities, that ESMA had taken a narrow and restrictive interpretation of market making activity. This was seen as being detrimental to liquidity provision (these comments were in line with the points made during the consultation on the Guidelines).

142. The main reasons and arguments put forward by those competent authorities and market participants who were concerned by the impact on liquidity were as follows: the instrument per instrument approach (in particular in light of the 30-day waiting period); the trading venue membership requirement given that it excludes OTC instruments and limits the ability to offer OTC market mak-

ing; and the administrative burden caused by the notification process that hampers liquidity provision.

143. There was concern that the ability to offer OTC market making in instruments such as interest rate swaps and non-listed derivatives was limited. It would in the view of respondents limit competition and hamper liquidity, with particular risks for less liquid markets as OTC market makers would face significant extra burdens and costs in having to comply with the relevant provisions of the Regulation.

144. There were also concerns about the limited scope of instruments for which the market maker exemption could be used, given that this was based on the exhaustive list on instruments that create short or long positions. They expect that this limited scope would have serious adverse repercussions on liquidity provision in instruments outside this list if the market makers in such products are unable to obtain the exemption. In this context it was noted that the Guidelines would prevent use of the exemption for hedging market making in financial instruments such as corporate debt and convertible bonds where using shares, sovereign debt or sovereign CDS was a legitimate hedging strategy. For example it was stated that it is common practice to use a sovereign debt instrument to hedge a corporate bond against the sovereign credit risk as well as fluctuations in interest rate and thus losing this benefit of the market making exemption would have a detrimental impact of liquidity in the corporate bonds.

145. Turning to the procedure for obtaining the exemption, in general, competent authorities considered that the process for notifications of intent to use the market maker exemption was workable and appropriate. However, a number of authorities, particularly those dealing with high numbers of exemptions, did consider the current notification process entailed a heavy workload, with the instrument by instrument approach being particularly burdensome.

146. This was also the view of most of the market participants who commented on this issue. Market participants considered that, in particular, the notification of intent on an instrument by instrument basis was impracticable and cumbersome, hindering the timely provision of liquidity, especially in cases where new instruments were admitted quickly to trading on markets. While competent authorities had the option to expedite the process by accepting notifications within the 30 day objection period, there was concern about the risks of an uneven playing field as a result of different authorities processing notifications for exemption in the same instrument at different speeds. Various suggestions were made for alternatives to the instrument by instrument approach – for example, by reference to categories of instrument or through an activity-based or per market approach. Other requirements of the Guidelines were also considered to be burdensome. Among the examples cited were the requirement to document and evidence the qualifying criteria for each instrument and the requirement to provide, ex ante, an expected level of activity on a particular instrument.

147. On a separate but related issue, ESMA also sought the views of competent authorities on whether the market maker exemption should continue to apply to the requirement to report to competent authorities notifiable short positions in shares and sovereign debt. Although there were differences of view on this topic, the majority of competent authorities considered that, as matters currently stood, the benefits of requiring market makers to make these notifications did not justify removing the present exemption from this provision of the Regulation.

148. On the issue of exemptions for market makers in third countries whose legal and supervisory frameworks were deemed equivalent, those market participants who expressed a view considered

that the absence of equivalence declared by the European Commission is detrimental to them and their clients. It was also noted that there was no reasonable policy rationale for denying the availability of the exemption to non-EU entities, given that the Regulation is not restricted to activities taking place within the EEA. ESMA asks the Commission to take note of the fact that market participants did stress the need for determinations of equivalence assessment for third country regimes to be carried out.

ESMA proposal of advice

149. These are the proposals based on changing the text of the Regulation itself (Level 1) with in certain cases more detailed provisions in either technical standards or delegated acts (Level 2).

150. ESMA notes that a key factor in determining the Guidelines was the interpretation of the relevant provision of the Regulation (Article 2(1)(k)) which necessarily constrained the parameters of the exemption. The review of the Regulation provides the opportunity to re-consider the scope of and conditions for the exemption whilst still respecting the underlying purpose and rationale of the Regulation. ESMA considers that the arguments for an exemption for market makers (and authorised primary dealers) from various of the provisions of the Regulation remain valid, given that these parties need to take short positions and conduct short sales in order to fulfil their role. Requiring them to obtain the necessary confirmations each time they carried out a short sale of a share or sovereign debt would impede their market making and impact liquidity in the market. Similarly, it is recognised that any significant short positions that market makers obtained in the course of their market making operations would only be for very brief periods while they squared their book and would not be long-term, directional bets on the price of the financial instrument. Requiring them to disclose those positions would serve little purpose and could prejudice their market making activity since sellers would know the market maker was short in a particular instrument and could adjust their prices accordingly.

151. The market making exemption is particularly important in sovereign CDS, given the prohibition on undertaking uncovered sovereign CDS transactions. In the absence of the exemption, this prohibition would effectively mean that market makers in sovereign CDS would be unable to make two way markets[12].

Trading venue membership

152. ESMA considers that, in principle, the above reasons for providing a market maker exemption apply whether the market maker is dealing in an OTC product or an exchange-traded one. This needs to be clarified in the definition of market making activities set out in Article 2(1)(k) of the Regulation. For example, market makers in OTC equity derivatives may hedge their risk by taking a short position in the corresponding underlying equity. A requirement to obtain the necessary locate and other confirmations every time they conduct a short sale will add extra process and costs to their market making operations and affect the efficiency and cost of risk management of market making,

[12] The reason is that market makers in sovereign CDS on an ongoing basis normally hedge the positions they enter into by adopting an opposite position through an offsetting CDS or by selling/buying the underlying of the CDS (the sovereign bond). However, that hedging is not instantaneous and simultaneous to the conclusion of the CDS transaction. Therefore, if a CDS dealer is quoting two way prices and one of his clients hits the buy quote, the firm will find itself as a buyer of protection and (unless it previously held a long position that can offset the new short CDS position) it will have an uncovered sovereign CDS position thus breaching the Regulation.

especially in less liquid instruments. In turn this could result in reduced liquidity in these markets, and increase costs for customers. Under the current Guidelines OTC equity derivative market makers are therefore at a disadvantage to their exchange-traded equity derivative counterparts who would qualify for the market maker exemption under the ESMA Guidelines. Although this is in line with the interpretation of the wording of Article 2(1)(k), it is not clear that this different treatment of market makers in OTC products is justified. ESMA therefore is of the view that the requirement in the Regulation for the market maker to be a member of a trading venue on which the product in which it is market making is admitted to trading should be reconsidered in Article 2(1)(k) of the Regulation – at least in respect of financial instruments not admitted to any EU trading venue.

Product Scope

153. Similar arguments apply in respect of the scope of the financial instruments in which the exemption can be used, subject to the other conditions for the exemption being met. ESMA is of the view that a wider scope should be adopted on the basis of an explicit statement in Level 1 or Level 2 of which financial instruments fall within the exemption. At present, in addition to shares and sovereign debt, the exemption can only be used for instruments which would create a long or short position in these primary products. Activities in the corresponding share or sovereign debt are then exempted to the extent that they are undertaken for the purposes of hedging market making activities in the financial instrument in question. However, ESMA accepts that shares and sovereign debt are used for hedging products other than equity and sovereign debt derivatives. As noted above, it is a common strategy for market makers in corporate bonds to hedge their market making risks via trades in the relevant sovereign debt. Without the exemption the corporate bond market maker would face additional costs and problems in doing so. Similar considerations apply to convertible bonds and subscription rights market making. Denying such market makers the exemption seems difficult to justify given that trading in the appropriate shares or sovereign debt is as legitimate a hedging strategy for them as for market makers in equity or sovereign debt derivatives.

154. ESMA therefore recommends that the scope of the financial instruments eligible for the market maker exemption should be expanded, subject to the product being within the scope of the Regulation overall as currently defined in Article 1 of the Regulation. As under the present arrangements, to provide clarity and certainty for competent authorities and market participants alike and to prevent abuse, ESMA proposes that the list of products for which the exemption is available should be explicitly stated. This could be either be done in the definition of the market making activities in Article 2(1)(k) or Article 17 of the Regulation itself (Level 1) or through technical standards or delegated acts (Level 2).

Procedure for obtaining the market maker exemption

155. ESMA also proposes that the current instrument-by-instrument approach to the exemption is changed as it is clearly found to be difficult and burdensome by market participants and also by some competent authorities. For that reason ESMA suggests that exemptions should also be capable of being granted on the basis of particular exchange indices (e.g. FTSE 100 or the Deutsche Borse TecDAX) or sectoral categories. This needs to be clarified in Article 17 of the Regulation itself (Level 1) or by empowering ESMA to develop draft technical standards or by empowering the COM to adopt delegated acts (Level 2). ESMA considers that it is necessary for competent authorities to know to which financial instruments the exemption for each market maker applies and remains of the view that it would not be appropriate to grant exemptions on a blanket basis (e.g. for all shares traded on the Borsa Italiana or Euronext Paris). However, granting exemptions on the basis of indi-

ces or sectoral categories would make the process more manageable without compromising the ability of the competent authority to monitor the exemption. The market maker would not be required to notify a competent authority each time a new share was added to the index/sector but the authority would continue to be able to identify which shares the exemption applied to and gain evidence of the market making activities of the firm in these stocks.

156. ESMA also proposes that the 30 day period specified in Article 17 of the Regulation for objecting to use of the exemption should not apply to newly admitted instruments for which there is no historical trading data available. This should apply to instruments admitted to trading for the first time in the EU and where a market maker was specifically mandated by a trading venue to undertake market making in a share that was admitted to the trading venue for the first time. ESMA considers that the concerned competent authority can, at any time, decide to withdraw the benefits of the exemption in case there have been changes in the circumstances of the natural or legal person so that it no longer satisfies the conditions of the exemption.

IX. Intervention powers and emergency measures

Extract from the Commission's request

ESMA would conduct a representative survey of market participants and competent authorities in order to answer the following question[s]:

> *whether the thresholds set to identify a significant drop in the price of financial instruments are appropriate for all instruments, and whether (and if so how) thresholds should be set for significant price falls in UCITS and commodity derivatives*

157. In addition to the standards requirements laid down by the Regulation, individual competent authorities and ESMA have available various emergency powers of intervention if specific conditions are met. The purpose is to enable them to deal with a range of different exceptional circumstances. For competent authorities these powers include:

    a. to impose notification or disclosure requirements concerning short positions in financial instruments other than shares, sovereign debt and sovereign CDS (Article 18);

    b. to require notification by lenders of financial instruments of any significant changes in the fees for lending that financial instrument (Article 19);

    c. to prohibit or impose conditions on entering into a short sale or equivalent transaction. Such action may be taken in respect of all financial instruments, a specific class of financial instrument or a specific financial instrument (Article 20);

    d. to restrict the ability of persons to enter into sovereign CDS transactions or to limit the value of sovereign CDS positions which may be entered into (Article 21).

158. Use of the powers is subject to conditions. There must be adverse events or developments which constitute a serious threat to financial stability or market confidence. The measure taken must be necessary to address the threat and the detrimental effects must not be disproportionate to the ben-

efits. ESMA and other competent authorities must be notified in advance and ESMA has a co-ordination role, including giving opinions on the measures proposed.

159. Since the application of the Regulation, two competent authorities have used the powers of intervention granted under Article 20 of the Regulation,. In one case, the measure concerns a temporary prohibition of short selling of shares and in the second case, a temporary prohibition of entry into short positions in specified shares. While the temporary prohibition of short selling was partially lifted, the temporary prohibition of entry into short positions expired at the end of January 2013.

160. ESMA also has intervention powers of its own. It may require the notification or disclosure of net short positions in any specific financial instrument or class of financial instruments. It may also prohibit or impose conditions on entry into a short sale or equivalent transactions. In order for ESMA to exercise its powers, the measure must be necessary to address a threat to the orderly functioning and integrity of financial markets or to the stability of the whole or part of the EU financial system and there must be cross-border implications. It must also be the case that no competent authority has taken measures to address that threat or that, where one or more competent authorities have taken such action, the measures taken do not adequately address the threat. ESMA is required to take into account various factors and undertake various consultations and notifications before taking action.

161. Article 23 of the Regulation also provides powers to competent authorities to temporarily restrict short selling or otherwise limit transactions in a financial instrument on a trading venue where the price of a financial instrument on that trading venue has fallen significantly during a single trading day from the closing price on the previous trading day. The levels of intra-day price fall which trigger consideration of whether to exercise these powers are set for liquid shares in the Regulation itself and for other types of share and other types of financial instrument in Commission Delegated Regulation (EU) No 918/2012. No trigger thresholds have yet been set for UCITS or commodity derivatives. So far this power to temporarily restrict short selling or otherwise limit transactions in a financial instrument has been exercised seven times by one single MS.

IX- I. On the bans introduced

Findings

Empirical evidence on implemented bans

162. Since the entry into force of the Regulation on 1 November 2012, some national competent authorities have implemented short selling bans.

163. Article 23 of the Regulation allows competent authorities to impose temporary restrictions on short-selling in case of significant price falls (“temporary bans”). Upon crossing this threshold, an authority may or may not decide to impose a temporary ban on short-selling after it has notified ESMA and sought the opinion of other competent authorities. The thresholds identified as “significant” are:

a. a 10%, 20% and 40% drop in the price of liquid, semi-liquid and illiquid shares, respectively;

b. a 7% and 10% increase in sovereign and corporate bond yields, respectively;

c. a 1.5% drop in the price of money market instruments;

d. a 10 % drop in the price of ETFs.

164. Since 1 November 2012, there have been seven temporary bans imposed. All bans were imposed by Consob on Italian shares traded on the Milan stock exchange (Table T.03).

Temporary short-selling restrictions T.03

Stock	Date(s)	Ban start	Ban lift
Saipem	31/01/2013	Opening	COB
Finmeccanica	12/02/2013	11:30	--
	13/02/2013	Opening	COB
Intesa San Paolo	26/02/2013	12:15	--
	27/02/2013	Opening	COB
Banca Carige	26/02/2013	13:20	--
	27/02/2013	Opening	COB
Banco Popolare	27/02/2013	Opening	COB
Mediolanum	27/02/2013	Opening	COB
Monte dei Paschi	02/04/2013	14:30	--
	03/04/2013	Opening	COB

Note: COB = Close of Business; Bans introduced following a 10% price fall during a trading session relative to price at the previous close
Sources: ESMA

165. Since 1 November 2012, two emergency measures under Article 20 of the Regulation ("longer term bans") have been introduced, although they were the prolongation of existing national bans before the entry into force of the Regulation, and lifted at least partially since then. In Greece, a ban originally introduced on 24 July 2012, preventing short sales of shares traded on the Athens Stock Exchange, was partially lifted on 1 February 2013: the ban still applies to the shares of credit institutions comprising the FTSE/Athex Banking Index (seven bank stocks) until 31 July 2013[13]. In Spain, the ban on taking net short positions originally introduced on 1 November 2011 expired (for all shares) on 1 February 2013.

Quantitative analysis of the bans introduced

Temporary bans

166. The objective has been to analyse the impact of temporary short-selling restrictions on markets. The analysis is therefore limited to the available instances where a restriction was imposed. Several points should therefore be noted:

a. in all instances, the shares under temporary short-selling restriction were constituents of the IT equity index (MIB) and are therefore very liquid; and

[13] The ban was renewed on 1 May 2013 for a maximum period of 3 months.

b. the restrictions were followed in several instances by the national competent authorities of other EU countries that deemed it useful to impose a ban on platforms where the same instrument is traded; however, this was not the case for every ban or trading venue.

167. The short-selling restrictions introduced during trading sessions tend to be imposed with a non-trivial delay. By the time a supervisor announces the restriction and market participants receive the information, the sell-off has typically already ended, prices have stabilized or rebounded and transaction volumes have started to normalize (Table T.04).

168. In some instances, the so-called "circuit breakers" (i.e. automatic trading interruptions on trading venues) overlapped with the temporary bans imposed. On 26 February 2013, for example, trading of Banca Carige, Intesa San Paolo and Mediolanum shares was interrupted at least once due to successive sell-offs. Any restriction on short-selling would therefore have been preceded by a trading interruption on Borsa Italiana, which complicates the analysis given the resulting gaps in price and volume data (Chart C.10).

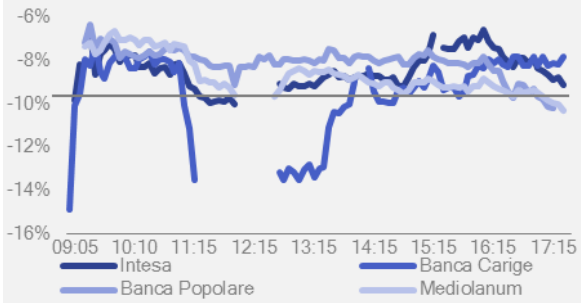
Timing of temporary bans T.04

	Threshold	Ban
Finmeccanica	09:45	11:30
Intesa San Paolo	11:30	12:15
Banca Carige	09:05	13:20
Monte dei Paschi	10:40	14:30

Note: Threshold is the time when share price dropped 10% or more relative to previous close, using 5-minute price data

Sources: Thomson Reuters Eikon, ESMA

Bank stocks banned after Italian elections (26/02/2013) C.10



Note: % change from previous close

Sources: Thomson Reuters Eikon, ESMA

169. Transaction volumes of shares tend to decrease during temporary short-selling bans relative to the pre-ban sell-off (Table T.05). However, a close analysis of trading volumes shows the following trend: (i) transaction volumes peak during the initial sell-off, upon markets opening; (ii) volumes progressively decrease as prices stabilise, but remain above average; (iii) a short-selling ban is imposed and trading volumes decrease further. The exact impact of bans on volumes is, therefore, difficult to disentangle from a simple normalisation of trading post sell-off.

Average transaction volumes of stocks under ban T.05

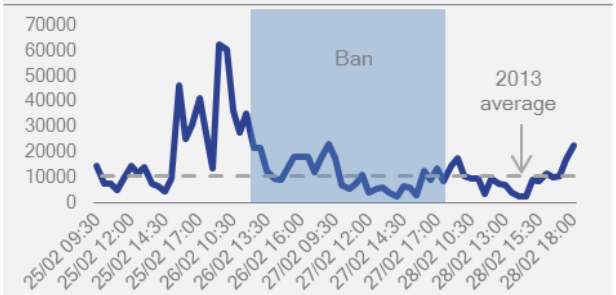
	Normal times	Pre-ban	Ban
Saipem	282,378	3,439,112	967,644
Finmeccanica	456,128	3,750,746	1,095,615
Intesa San Paolo	9,395,944	38,071,910	10,570,548
Banca Carige	166,671	1,637,999	244,298
Banco Popolare	948,657	1,845,809	761,558
Mediolanum	147,303	524,554	110,965
Banca Monte dei Paschi	10,539,990	27,017,762	9,525,206

Notes: Average number of transactions per 30 minutes; normal times defined as 5 days before and after the imposition of ban and lift; Pre-ban defined as period between sell-off and ban imposition

Sources: Thomson Reuters Eikon, ESMA

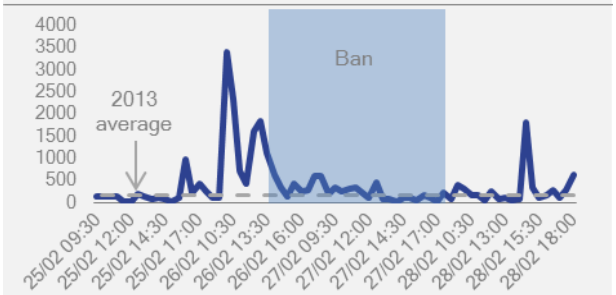
170. After a short-selling restriction is imposed, average transaction volumes fall sharply (-71.8%) relative to pre-ban averages (Charts C.11 and C.12). Transaction volumes tend to remain nonetheless somewhat higher than in normal times, although this is not true of all shares.

Intesa San Paolo: Trading volumes around ban C.11



Note: Thousand shares traded per 30 minutes.
Sources: Thomson Reuters Eikon, ESMA.

Banca Carige: Trading volumes around ban C.12



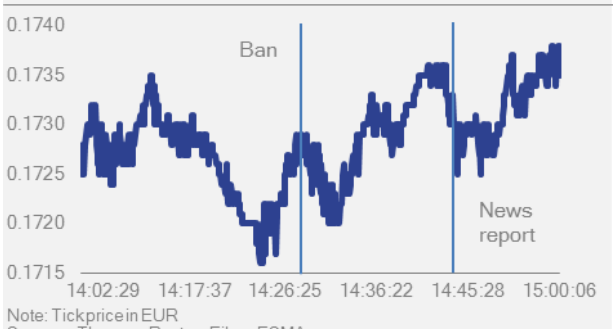
Note: Thousand shares traded per 30 minutes.
Sources: Thomson Reuters Eikon, ESMA.

171. Temporary bans do not seem to have a significant impact on price formation. Using first order auto-correlation on five-minute price returns, there is no significant difference in price formation for shares under temporary bans compared with normal times, except for one share. For shares subject to a ban, average trading volumes on Multilateral Trading Facilities (in the event that short-selling is still allowed) appear to decrease between the pre-ban and ban periods at a broadly comparable scale to that of the main trading venue (-61.5%). There does not seem to be a significant substitution effect that would increase the volume of restricted shares on alternative venues. Lastly, bans do not seem to introduce a pricing delay on the trading venue where the short-selling ban is in place, potentially as a result of price arbitrages with alternative venues where short sales are still allowed.

172. Temporary bans do not seem to have a significant impact on price volatility, and have a small positive impact on returns of the shares under restriction:

a. The announcement of the restriction itself has no impact on volatility. For bans introduced during trading sessions, there was on average a 5 to 15-minute lag before the news was relayed by news wires (Thomson Reuters; Table T.06). Although this diffusion time may partially explain the absence of simultaneous reaction, there were no significant changes in transaction volumes or unusual price movements either upon the announcement of the ban or diffusion of the news (Chart C.13).

Monte dei Paschi: Share price on April 2 C.13



Note: Tick price in EUR
Sources: Thomson Reuters Eikon, ESMA

Ban news diffusion time T.06

	Ban	Newswire
Intesa San Paolo	12:15	12:19
Banca Carige	13:20	13:31
Banca Monte dei Paschi	14:30	14:44

Note: Time of ban announcement and news publication on Thomson Reuters Eikon.
Sources: Thomson Reuters Eikon, ESMA.

b. The econometric analysis shows that temporary bans do not trigger significant changes in volatility—i.e. the size and direction of the impact on volatility is too uncertain to be conclusive. Individual observations show that although volatility is lower during the ban for stocks under restriction, this is mostly explained by lower overall stock market volatility as measured by changes in MIB prices and prices of an IT financial sector index. The same method shows that short-selling restrictions may increase returns marginally. This might be explained by some short-sellers unwinding their position and thereby supporting prices.

173. The lifting of temporary short-selling restrictions does not seem to have a measurable impact on markets—consistent with the idea that temporary bans have a limited overall effect. On the day following the lift of temporary short-selling restrictions, prices remain stable and volatility broadly unchanged relative to the ban period. While trading volumes peak upon markets reopening, this seems to be a standard feature and there is no specific pattern suggesting that "pent-up" short-sales might be taking place (i.e. to compensate the impossibility to short sale during the ban).

Longer-term bans[14]

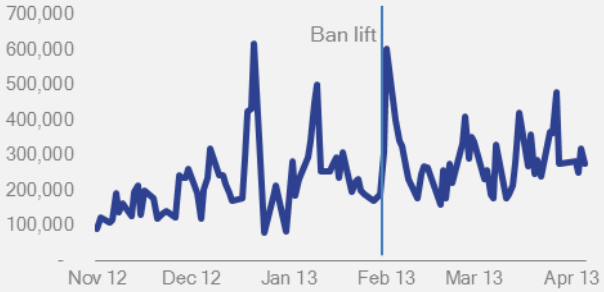
174. Based on the existing evidence, lifting longer-term (as opposed to temporary) short-selling bans seems to have only a mixed impact[15] on markets. The analysis focuses on four metrics, using daily data: transaction volumes, bid-ask spreads, price returns and returns volatility. Overall, the ban lift seems to have a mixed impact with some differences between the two countries observed.

175. In Spain, the impact of the lift on market liquidity is mixed: the lift was followed by an increase in trading volumes, especially on the day of the lift (1 February 2013), even controlling for higher-than-usual transaction volumes on European markets that day (Chart C.14); however, the analysis shows that the lift did not have a significant impact on bid-ask spreads. On prices, the lift did not have a significant impact either on daily returns nor volatility (Chart C.15).

[14] The academic literature on price discovery, price formation and efficiency focuses on longer-term bans (i.e. *not* temporary restrictions). According to M. Pagano and A. Beber (2009), short-selling bans tend to have a negative impact on price discovery, in addition to being negative for market liquidity—especially small market caps. These results are corroborated by Boehmer and Wu (2013) who wrote that short-selling is associated with more efficient pricing and enhanced price discovery mechanism. Empirical studies such as Bris, Goetzmann and Zhu's (2007) also support the idea that short-selling restrictions inhibit (downward) price discovery and were detrimental to market efficiency in the countries where bans were imposed.

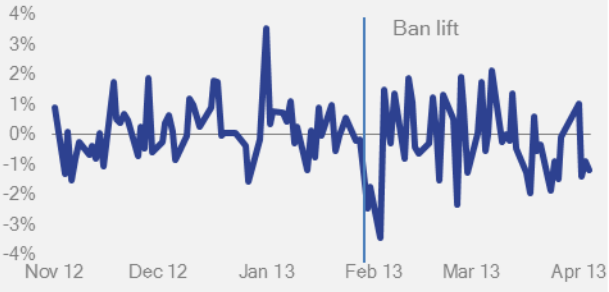
[15] The consequences of lifting short-selling bans have not been directly addressed in the academic literature as most studies focus on the periods before and during the short-selling restriction (or the period during versus the periods outside the restriction—i.e. both before and after the bans). The focus of the academic literature is broader, however, than the price discovery effects outlined above. According to empirical analysis from A. Beber and M. Pagano, the authoritative authors in this field, short-selling bans also tend to increase bid-ask spreads and the Amihud illiquidity indicator (also used in IV.I), while the impact on price returns is mixed: positive in the case of the US for stocks with short-selling bans on financials only, but potentially detrimental for the non-US markets included in the sample.

Spanish stocks: daily transaction volumes C.14



Note: Sum of daily trading volumes for IBEX shares, in thousands.
Sources: Thomson Reuters Datastream, ESMA

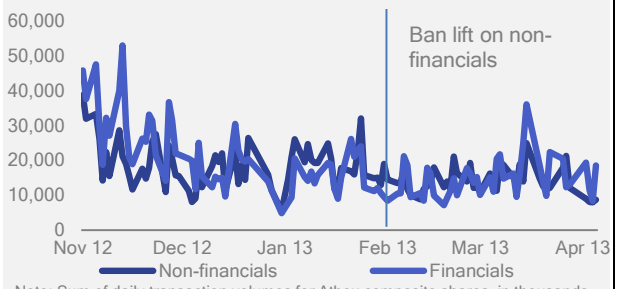
Spanish stocks: Average daily returns C.15



Note: average daily returns calculated as natural log for 35 liquid shares from IBEX.
Sources: Thomson Reuters Datastream, ESMA

176. In Greece, where the ban was lifted for non-financials but prolonged for financials, the ban lift was followed by higher relative volumes for non-financials. Bid-ask spreads, however, were not significantly impacted, and the overall impact of the lift on market liquidity is therefore mixed. While the impact of the lift on daily returns is not significant either, it had a significant effect on volatility, resulting in higher volatility for non-financials after the ban was lifted.

Greek stocks: daily transaction volumes C.16



Note: Sum of daily transaction volumes for Athex composite shares, in thousands. Ban lifted on 1 Feb 2013 except for 7 bank stocks.
Sources: Thomson Reuters Datastream, ESMA.

Greek stocks: Volatility and average daily returns T.07

	Returns		Volatility	
	Non-Financials	Financials	Non-financials	Financials
During ban	0.7%	-0.2%	1.8	4.9
After ban lift	-0.5%	-1.1%	2.1	3.1

Notes: Average daily returns and total standard deviation before and after ban is lifted on non-financial stocks on 1 Feb 2013.

Sources: Thomson Reuters Datastream, ESMA.

Feed-back from market participants and competent authorities

177. Questions on intervention powers and emergency measures were addressed to both, competent authorities and market participants. Some questions were only directed to one side.

Effects of imposed temporary emergency restrictions

178. Market participants were asked for the effects of temporary restrictions imposed by competent authorities on short selling since the application of the Regulation. Increased volatility and widened spreads, notably when bans were communicated at last minute were mentioned. Regarding the three months-ban of Spain some reported a dramatically decreased liquidity, including reduction in volumes. One respondent indicated that temporary bans also distort the fair valuations of securities by removing a large set of participants. Others highlighted a high level of uncertainty, particularly on whether index linked instruments are included. Some suggestions were made for alternatives. For example one market participants suggested that temporary bans imposition should not be at the discretion of national competent authorities but should follow harmonised standards agreed in advance with ESMA, the latter being in charge of overseeing the consistent and appropriate applica-

tion. Others considered to exclude index linked instruments (e.g. index derivatives) from any emergency measures, as a condition for non-objection by ESMA. Particularly they proposed that cash settle index derivatives related to the most commonly used liquid indices or to include indices/basket should be included only when a security represented weights more than a certain threshold e.g. 20% or to implement an approach depending of the number of constituents.

Information published in case of emergency bans

179. ESMA sought the view on whether the information to be published according to Article 25 of the Regulation by competent authorities in case of emergency bans is sufficient.

180. Almost all responding competent authorities considered that the information published according to Article 25 of the Regulation is sufficient. A couple of them however considered the information published as inadequate and argued that it should be clear what is and is not covered by an emergency measure and what activity would contravene. Q&As as well as a list of the measure, instruments/classes of transactions and duration of the emergency measure are needed to achieve this. Besides the information should include whether the measure applies to market making activities. In addition one competent authority mentioned that a requirement to make a decision public via a news distributor or similar would help to inform market participants faster and more adequately.

181. More market participants noted that the information is not sufficient than those who found it sufficient. The majority required additional information such as the financial instruments affected, including indices, depositary receipts and derivatives. One respondent argued that when the introducing competent authority intends to apply the measure to an instrument outside its competence, there should be a need to obtain explicit approval from the relevant competent authority, to be in line with MiFID rules. Furthermore, a detailed explanation of the reasons why the ban is required on the basis of the legal conditions should be given and whether any exemption, notably the market making exemptions applies.

Method for publication and communication

182. The current method for publication and communication of emergency measures was found inadequate and inefficient by many market participants. Reasons are that a daily monitoring of all websites of all competent authorities is unmanageable and also language issues lead to a risk of regulatory failing. To reduce possible confusion and potential market disruption the publication must be proactive with “reasonable time” needed between dissemination and effect of the measures. Some stated that at least 24 hours in advance were to allow market participants to implement appropriate controls to ensure compliance such as the raise of questions with competent authorities prior to implementation and to allow unwinding of positions that would not be compliant anymore.

183. The following solutions were suggested by market participants for timely, explicit and reliable information as well as a wide and clear communication on the emergency measures. Some considered a service from ESMA and the competent authorities allowing registering for reception of email alerts or a direct emailing by competent authorities to persons in charge of short selling within firms. Communication should also be in English or the information should be translated in all necessary languages. A lot of market members proposed a central register/single platform for communication such as centralised website/RSS feed or ESMA website. In any event a standard template to describe the scope of the measures and/or simultaneously standardised Q&As elaborated in advance and in

anticipation on the basis of ex ante ESMA guidance should exist. Besides the use of harmonised terms and key definitions would be appreciated.

Intervention powers and emergency measures regarding Article 26 and Article 28 of the Regulation

184. The questions relating to the intervention powers and emergency measures regarding Article 26 and Article 28 of the Regulation deal with the process required for the emergency measures and possible simplifications. It was also asked if the minimum content of information required by the competent authorities is appropriate.

185. A majority of competent authorities considered the process under Article 26 of the Regulation that requires a notification of the emergency measure to ESMA and the other competent authorities to be workable and appropriate but require a simplified procedure especially for reacting authorities. Some mentioned that exceptions and duration of the measures should also be notified. There was one suggestion to revise the process under Article 26 to allow immediate introduction of a national longer term prohibition without having to wait for ESMA's opinion.

186. A few competent authorities suggested amendments to the process but thought the main problem lays in Article 23 of the Regulation (measures by competent authorities in cases of significant fall in price).

187. Competent authorities' views were almost evenly divided on the double notification requirement imposed by Article 26 and Article 23 of the Regulation in case of temporary bans due to significant fall in price. Article 26 requires among other things a prior notification to ESMA and the other competent authorities before imposing any restrictions that prevent significant falls in prices according to Article 23 of the Regulation, and Article 23 itself requires a notification about the decision taken to ESMA which in turn should inform the competent authorities of venues which trade the same financial instrument. Whereas almost half of the responding competent authorities considered appropriate to repeal the notification duty of Article 26, the rest mentioned that the cross-reference to Article 23 in Article 26 should be maintained as it is necessary for competent authorities to be notified in advance both of the first imposition of a ban and of any subsequent extension. One competent authority additionally pointed out that it would not be appropriate to delete the parts that relate to Article 23 from Article 26 because they are needed for the cases where the competent authority that receives the notification will join the measure, otherwise that would have to go through the whole procedure of Article 23 (inform ESMA; ESMA inform the other competent authorities, other competent authority can disagree, conciliation etc.).

188. Competent authorities' views differed on whether it would be appropriate, under Article 26, to replace a notification from the initiating authority to both ESMA and the other competent authorities with a notification only to ESMA and require ESMA to inform the other competent authorities. Besides the statement that it is easier just to inform ESMA, no reason for the deletion was given by this majority of competent authorities which requested it. On the opposite, the authorities who do not prefer to replace the dual notification requirement argued that it is much appreciated to get notice of the intended measure as soon as possible.

189. Regarding ESMAs intervention power in exceptional circumstances according to Article 28 of the Regulation the procedure in place deemed to be adequate but respondents said given the fact that ESMA has never used its intervention power there is no evidence for or against it.

Temporary restrictions in cases of significant falls of prices (Article 23)

190. Market participants noted that there is no evidence to suggest that the Article 23 bans had an effect and are considered ineffective if imposed only on a national trading venue without the other EU venues concerned imposing similar ban. Others stated that the bans created confusion and uncertainty for participants and led to immediate impact on liquidity and price efficiency, including also on other instruments than the ones targeted. Furthermore the measure caused investigative costs for market participants to seek the information due to differences in content (e.g. market making exemptions), in timing of the releases during the trading day in the concerned countries and due to lack of clarity about the scope of instruments. The application of the market making guidelines will further impact the markets in case of Article 23 bans as some hedging activities will not be deemed as market making activities. It was suggested by a market participant that a co-ordinated approach to volatility interruption and circuit breakers would provide an appropriate framework

191. When asked about the procedure set out in Article 23 of the Regulation, competent authorities responses were almost evenly split between those considering that the procedure is workable and appropriate and those having the opposite view. The latter considered that the short time frame for decision-making causes a lot of problems in practice and also requires a huge amount of resources as well as the procedure involving, where necessary a conciliation process is too complex. Alternatives were suggested by some. One competent authority proposed to simplify the overall procedure by awarding the competent authority introducing the power to impose to other competent authorities the measure under two conditions a) the competent authority is the one of the most liquid market for the relevant instrument and b) price fall has happened in the most liquid market. Consequently, other competent authorities would necessarily have to implement the measure, thus eliminating the conciliation phase. Another competent authority proposes two time frames for the reaction of the competent authorities depending on when the measure is imposed (during the trading session or after the trading session). A third competent authority stated that the existing circuit breakers carry out the task better than the measures of Article 23 of the Regulation.

192. When asked whether there are other restrictions like circuit breakers that prevent significant falls in prices, a small minority of the responding competent authorities declared not to have such other restrictions whereas the others stated having other restrictions in place. The trading on the regulated market may be suspended if orderly trading on the stock exchange is temporarily endangered or if the suspension is deemed as necessary in the interest of protecting the public. Furthermore some trading system features several technical safeguards such as order entry/modification checks and message throttles to protect the system from being flooded with orders. Competent authorities also reported that additional safeguards depending on the market model exists on the trading venues, e.g. volatility interruptions serve as circuit breakers by interrupting continuous trading whenever an order leads to a price outside the defined spread and pre-defined parameters are exceeded as the volatility is high.

193. In addition, one competent authority requested further guidance to what might be considered a disorderly fall in prices. Another competent authority stated that there is no official EU database which enables to consult the list of the trading venues where a financial instrument is traded and therefore a certain level of uncertainty has to be faced when checking whether a decision has to be taken on a concerned financial instrument.

IX- II. On the appropriateness of thresholds for significant fall in price

Findings

Quantitative assessment

194. To assess the relevance of existing thresholds to identify significant price falls, an empirical approach was followed by ESMA based on the historical distribution of daily returns.

195. For equities, a large sample of 2,216 EU equities was used to estimate the distribution of daily returns over the last five years. A smaller sample made of the constituents of the Eurostoxx50 index was also used and both the distribution of daily returns and intraday low returns were computed16. For bonds, the constituents of IBOXX sovereign and corporate bond indices were used.

196. As shown in Table T.08 for equities, the thresholds would be crossed less than 0.6% of the time. Based on intraday low returns for equities, only 0.9% of all negative returns would cross the thresholds. For ETFs, only 0.2% of daily returns were less than the 10% threshold. For corporate bonds, the thresholds would be crossed less than 0.2% of the time. However, for sovereign bonds the share is much higher at around 2.2% for euro area sovereign bonds and 1.7% for UK sovereign bonds. This higher share for sovereigns is partially linked to lower thresholds17 (7% against 10% for corporate bonds), but mainly to the current low level of sovereign yields. This implies that even small absolute changes in prices can lead to large relative changes in yields (used for setting the thresholds).

Number of events where the thresholds were crossed over the last five years. T.08

Asset class	Threshold	Percentage of observations that reach the thresholds	Number of events (total events)
Liquid shares (Eurostoxx50 constituents)	-10%	0.31%	203 (65050)
Liquid shares (Eurostoxx50 constituents), intraday low	-10%	0.90%	490 (54511)
All shares (2216 EU equities)	-10%	0.54%	14223 (2.6mn)
Exchange-Traded Funds (500 ETFs)	-10%	0.02%	35 (185905)
Euro area sovereign bonds (266 bonds)	+7%	2.22%	5074 (228355)
UK sovereign bonds (40 bonds)	+7%	1.73%	636 (36864)
EUR corporate bonds (1336 bonds)	+10%	0.12%	1063 (881984)
GBP corporate bonds (39 bonds)	+10%	0.07%	20 (29849)

Note: The distribution of returns is based on the last five years of daily data.
Sources: Thomson Reuters Datastream, ESMA.

197. On the appropriateness of setting thresholds for UCITS, it appears that i) only listed UCITS can be shorted and ii) most listed UCITS are ETFs which already fall under the scope of the Regulation. Therefore extending the regulation to all listed UCITS would have in the short run a limited impact, except in a few countries such as Denmark where all UCITS are listed.

[16] The intraday low returns are computed as the difference between the lowest price on day T and the close price on T-1.
[17] Using the 10% thresholds for sovereign bonds would lead to a share of 1.3% for EUR sovereigns and 0.8% for GBP sovereign bonds.

198. Overall, based on the empirical evidence, the current thresholds set to identify significant price fall appear to cover an extreme part of the distribution of returns, indicating that these thresholds would not be crossed very often for equities and corporate bonds. For sovereign bonds it appears that the current thresholds lead to a large share of observations crossing the thresholds. If the objective is to have thresholds that would cover the same share of events across asset classes, then thresholds for sovereign bonds should be increased in terms of yields.

Feed-back from market participants and competent authorities

199. Regarding the question on whether the current thresholds of Article 23 of the Regulation set to identify a significant drop in the price of financial instruments are appropriate for all categories of instruments and if and how additional thresholds should be set for UCITs and commodity derivatives competent authorities18 considered that the current thresholds for ETFs and shares were reasonable, whereas for the latter three competent authorities stated this only for liquid shares. 6 competent authorities did not answer. However, especially with regard to bonds some competent authorities stated the current thresholds are not appropriate as the thresholds are significantly too low. The figures regarding the trigger events (e.g. 1,786 German sovereign bonds on Frankfurt Exchange) show that the current thresholds generated a large number of trigger events for which, with the exception of one competent authority, no competent authority found a reason to prohibit or restrict short sales in these instruments.

200. When asked how many trigger events (significant falls in price) had arisen so far and also if and why members states had taken measures to temporarily suspended short selling or otherwise limited transaction, the competent authorities provided the following answers:

201. Most of the competent authorities indicated that either no trigger events or only a small number of trigger events in liquid shares and instruments of the other categories defined in Article 23 of the Delegated Regulation 918/2012 had occurred so far. A number of competent authorities could not say if there had been events and how much because they had not kept track of these events

202. In contrast, a few competent authorities reported substantial numbers of trigger events:

a. One authority reported the following trigger events: 6 on liquid shares, 6 on other shares, 274 on corporate bonds: 274 and none on sovereign bonds.

b. A second authority reported a more substantial number of trigger events: 78 on liquid Shares, 572 on shares with threshold above 10%, 445 on bonds and 4 on ETFs.

c. A third one, namely Germany[19], reported a large number of trigger events had occurred, at least in one of the categories.

[18] In Germany the trading venues (Frankfurter Exchange, Tradegate Exchange, Berlin Exchange, Düsseldorf Exchange, Hamburg and Hannover Exchange, Munich Exchange and Stuttgart Exchange) are the competent authorities.

	Liquid Shares	Shares >= 0.50 €	Shares < 0.50 €	Shares in total	Sovereign Bonds	Corporate Bonds	Bonds in total	ETFs

203. It should be noted that besides Italy no MS had initiated its own measures, but some followed the Italian measures.

204. While one market participant stated that all thresholds seemed reasonable, the view of most of the market participants who commented on the appropriateness of the current thresholds set to identify a significant intraday fall in the price of financial instruments argued that the thresholds should be reviewed because they have not been set appropriate in any case and too many trigger events without any reason for a ban to be imposed had occurred. This applies especially for bonds. In total the thresholds do not take into account episodic trading on instruments, usually with low liquidity and they are not appropriate to small and mid-caps. On the other hand those market participants who comment on ETFs state that these thresholds were reasonable.

205. Trading venues suggested alternative solutions. It was proposed to set a threshold of 20% for stocks with price of at least 1 euro, 40% for stock with price where price is between EUR 0,999 and EUR 0,10 and shares with a share price below EUR 0,10 should not be screened at all. For bonds, it was suggested to use a change in price rather than a reference to yield curves. One market participant suggested distinguishing between liquid and illiquid bonds by using MiFIR, to avoid events triggering due simply to episodic trading; thus only liquid ones should be considered and a change in the method should be introduced i.e. a reference period equalling to the last 30 days. Another recommended an approach based on two yield classes for corporate bonds, each with wider thresholds than the one currently set, and, with regard to sovereign bonds, issuers could be assigned in two different classes depending on the yield of a single reference maturity (e.g. ten-year bond) and the thresholds could be widened.

206. With regard to thresholds for UCITS and commodity derivatives, the vast majority of the competent authorities did not see the need to consider thresholds for significant price falls in these instruments. The reasons given were that no sensible thresholds could be set both UCITS and commodity derivatives have a strong link with the underlying markets and therefore imposing restrictions only on the UCITS/commodity derivatives could undermine the efficiency of the price discovery process and create price misalignments between the value of the UCITS and the price of underlying securities and between the pricing of derivatives and the commodity spot market. One competent authority considered that thresholds should be set for commodity derivatives though

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[19]	Liquid Shares	Shares >= 0.50 €	Shares < 0.50 €	Shares in total	Sovereign Bonds	Corporate Bonds	Bonds in total	ETFs
Frankfurt*	1	67	126	n/a	German: 1,786 Other: 1,745	8,299	n/a	0
Xetra*	1	33	25	n/a	German: 1,187 Other: 261	648	n/a	1
Tradegate**	100	111	259	n/a	0	n/a	n/a	56
Berlin**	23	2	1	n/a	n/a	28	n/a	n/a
Düsseldorf	1	n/a	n/a.	75	n/a	n/a	350/per day	n/a
Hamburg	7	11	10	n/a	3	57	n/a	n/a
Hannover	3	3	1	n/a	19	54	n/a	n/a
Munich	0	0	0	n/a	0	0	n/a	0
Stuttgart	Liquid: 25 Index: 7	73	66	n/a	5	7	n/a	n/a

* time period from 15.11.2012 to 21.02.2013 ** time period from 01.11.2012 to 28.02.2013

without suggesting any method or relevant thresholds. Other competent authorities indicated that if thresholds were to be set for UCITS, they should be similar to the thresholds for liquid shares.

207. Also the vast majority of market participants commented that there is no need for thresholds for significant price falls in UCITS or commodity derivatives. Only some suggested threshold for both UCITS and commodity derivatives. Those proposed a 10% fall in price for UCITS or the price of their underlying for setting any thresholds and for commodity derivatives that the position limit is a criterion to be taken into account.

ESMA proposal of advice

208. With respect to emergency measures in case of adverse events or developments which constitute a serious threat to financial stability or market confidence (long term bans) under Articles 18, 19, 20 and 21 of the Regulation, the provisions of the Regulation are considered necessary and appropriate. Further actions at Level 3 may be envisaged to improve communication and publication when such bans are introduced.

209. However, ESMA suggests reconsidering the current approach of Article 23 of the Regulation. To ensure that the mechanism for introducing short term bans is workable, less complex and less resource intensive. It might be envisaged to allow the competent authority of the most relevant market in terms of liquidity for a particular instrument to exercise its judgment as to if and when a temporary measure to ban short selling or limit trading in a particular instruments is necessary without having to implement a mechanism based on thresholds for significant falls in price. In order to ensure a consistent approach and quasi simultaneous application across all European markets/trading venues where the concerned instrument is also traded, the measure taken by the initiating authority should be followed by the other concerned competent authorities.

Change of thresholds

210. Would the current provisions of Article 23 remain, ESMA considers that not all current thresholds set to identify a significant fall in prices for all categories of instruments as defined for liquid shares in Article 23 of the Regulation and for other classes as defined in Article 23 of Delegated Regulation 918/2012 should be maintained as some thresholds should be changed or removed. For that reason Article 23 of the Regulation and Article 23 of Delegated Regulation 918/2012 would need to be amended.

211. In particular ESMA proposes the following: for liquid shares the current thresholds with a decrease in the price of the share of 10 % or more is appropriate. In contrast, the thresholds for the other classes of shares should be reconsidered and where appropriate be raised or removed of the scope of the provision as the huge amount of trigger events showed that they are set significantly too low. Both, the thresholds for corporate bonds and sovereign bonds should be reconsidered or removed as the huge amount of trigger events showed that they are set significantly too low. ESMA still considers that no thresholds are necessary for listed UCITS (other than ETFs) considering first that the primary reason for many of these funds to seek listing is for selling/marketing purposes and second that their pricing is intrinsically related to the pricing of their underlying and transactions are usually carried away at the Net Asset Value of the UCITS. With respect to commodity derivatives negotiated on trading venues, setting thresholds does not seem appropriate considering that possible trading restriction on these derivatives might on one hand cause price misalignment between

the derivative and spot markets and, on the other hand, would not prevent trading on OTC products mirroring exchange traded derivatives.

Annex I - Commission mandate to provide technical advice

FORMAL REQUEST TO ESMA FOR TECHNICAL ADVICE ON THE EVALUATION OF THE REGULATION ON SHORT SELLING AND CERTAIN ASPECTS OF CREDIT DEFAULT SWAPS ((EC)NO 236/2012)

With this formal mandate to ESMA, the Commission seeks ESMA's technical advice on the evaluation of the Regulation on Short Selling and certain aspects of Credit Default Swaps (the "Regulation")20.

The Commission reserves the right to revise and/or supplement this formal mandate. The technical advice received on the basis of this mandate should not prejudge the Commission's final policy decision.

This request for technical advice will be made available on DG Internal Market's website once it has been sent to ESMA.

The formal mandate focuses on technical issues which follow from the Regulation. The Commission is under the obligation to Report to the European Parliament and the Council by 30 June 2013 on the following issues:

a. the appropriateness of the notification and disclosure thresholds for reporting of significant net short positions in shares to competent authorities (CA)'s, for publication of significant net short positions in shares, for reporting of significant net short positions in sovereign debt to CA's, and for reporting of significant net short positions in credit default swaps to CA's in times when restrictions on such positions have been lifted;

b. the impact of the individual disclosure requirements of significant net short positions in shares, in particular with regard to the efficiency and volatility of financial markets;

c. the appropriateness of direct, centralised reporting to ESMA;

d. the operation of the restrictions and requirements, notably the notification and reporting requirements, the ban on naked short selling of shares and government bonds, the ban on naked CDS, and the provisions regarding buy-in procedures;

e. the appropriateness of the restrictions on the uncovered sovereign credit default swaps and the appropriateness of any other restrictions or conditions on short selling or credit default swaps.

The Regulation requires the Commission to discuss these issues with the competent authorities and ESMA, before reporting to the European Parliament and the Council.

It should also be noted that the Regulation empowers CA's to temporarily limit short selling or otherwise restrict transactions in case of a significant fall in the price of a financial instrument. The Delegated Acts specified a threshold for most financial instruments but did not specify a threshold for those

[20] The text provisionally agreed by the Council and the European Parliament is available on the Council web site at this page: http://register.consilium.europa.eu/pdf/en/11/st16/st16338.en11.pdf Ref. Ares(2012)1243954 - 22/10/2012

derivatives without a financial underlying – in particular commodity derivatives- and UCITS. The Commission wishes to assess the appropriateness of not setting a threshold for these derivatives and UCITS and requests that this issue be addressed in part (e).

***

The European Parliament and the Council have been duly informed about this mandate.

1. Context

1.1 Scope

At the height of the financial crisis in September 2008, competent authorities in several Member States adopted emergency measures to restrict or ban short selling in some or all securities. More recently, several Member States have adopted emergency measures to restrict or ban short selling of shares, government bonds and through related derivatives.

The Regulation on short selling and certain aspects of credit default swaps (SSR)[21] lays down a common regulatory framework with regard to the requirements and powers relating to short selling and credit default swaps (CDS) and ensures greater coordination and consistency between Member States.

The Regulation aims to enhance transparency, reduce certain risks associated with short selling and uncovered CDS, and ensure a common regulatory approach across Member States.

The Regulation contains four principle measures to address these objectives:

- Transparency: significant short positions in shares must be notified to regulators above a threshold of 0.2% and to the public if above a higher threshold of 0.5%. Significant short positions in EU sovereign debt need only be notified to the regulator. There are exemptions for market making activities and primary market operations.

- Settlement: Restrictions on naked short selling are proposed through a requirement for a "locate plus" rule for short sales. This rule requires that the third party issue a "locate" which confirms that it is reasonable for the investor to expect to be able to cover their short sale. There are exemptions for market making activities and primary market operations.

- Intervention Powers: The Regulation gives national regulators and the new European Securities and Markets Authority (ESMA) the power to adopt measures in exceptional situations to mitigate threats to financial stability.

- A ban on naked sovereign CDS is introduced. Only CDS positions for legitimate hedging are permitted but regulators may suspend the ban if their sovereign debt market's liquidity falls significantly. There are exemptions for market making activities and primary market operations.

[21] Regulation (EU) No 236/2012

The transparency provisions and exemptions apply to persons whether resident or established in the EU or outside.

1.2 Principles that ESMA should take into account.

On the working approach, ESMA is invited to take account of the following principles:

- It should take account of the principles set out in the de Larosière Report and the Lamfalussy Report and mentioned in the Stockholm Resolution of 23 March 2001.

- The proper functioning of the internal market and to improve the conditions of its functioning, in particular with regard to the financial markets, and the high level of consumer and investor protection which are the objectives of this Regulation.

- The principle of proportionality: the technical advice should not go beyond what is necessary to achieve the objectives of the Regulation. It should be simple and avoid creating divergent practices by national competent authorities in the application of the Regulation.

- ESMA should respond efficiently by providing comprehensive advice on all subject matters covered by the mandate.

- While preparing its advice, ESMA should seek coherence within the regulatory framework of the Union.

- In accordance with the ESMA Regulation, ESMA should not feel confined in its reflection to elements that it considers should be addressed, if it finds it appropriate, it may indicate guidelines and recommendations.

- ESMA will determine its own working methods, including the roles of ESMA staff or internal committees. Nevertheless, horizontal questions should be dealt with in such a way as to ensure coherence between different works being carried out by ESMA.

- In accordance with the ESMA Regulation, ESMA is invited to widely consult market participants (practitioners, consumers and end-users) in an open and transparent manner. ESMA should provide advice which takes account of different opinions expressed by the market participants during their consultation.

- The technical advice carried out should contain sufficient and detailed explanations for the assessment done, and be presented in an easily understandable language respecting current legal terminology used in the field of securities markets and company law at European level.

- ESMA should provide sufficient factual data backing the analyses and gathered during its assessment. To meet the objectives of this mandate, it is important that the presentation of the advice produced by ESMA makes maximum use of the data gathered.

- ESMA should provide comprehensive technical analysis on the subject matters described below covered by the relevant Commission's request included in this mandate.

- ESMA should provide the Commission with an "articulated" text which means a clear and structured text, accompanied by sufficient and detailed explanations for the advice given, and which is

presented in an easily understandable language respecting current terminology used in the field of securities markets in the Union.

- ESMA should address to the Commission any question they might have concerning the clarification on the text of the Regulation

2 Procedure

The Commission would like to request the technical advice of ESMA in view of the review to be conducted pursuant to the legislative act and in particular regarding the questions referred to in section 3 of this formal mandate.

The Commission reserves the right to revise and/or supplement this formal mandate. The technical advice received on the basis of this mandate should not prejudge the Commission's final decision.

The Commission has duly informed the European Parliament and the Council about this mandate.

3. ESMA is invited to provide technical advice on the following issues:

ESMA is asked to consider the observable effects of the Regulation, if any, in order to answer the following questions, taking into account both the provisions relating to short selling as those pertaining to CDS:

i. Whether and to what extent the beneficial effects of short selling for volatility and price formation during normal times have been impacted by reporting and publication requirements or restrictions on uncovered short selling,

ii. to what extent any temporary restrictions imposed by competent authorities on short selling have had any positive effects in terms of reducing price falls, or any negative effects on volatility and price formation,

iii. to what extent the thresholds set for notification to CAs are appropriate for CAs' supervisory purposes and the thresholds for public disclosure are appropriate for the market's needs,

iv. whether the thresholds set to identify a significant drop in the price of financial instruments are appropriate for all instruments, and whether (and if so how) thresholds should be set for significant price falls in UCITS and commodity derivatives,

v. whether and to what extent the ban on naked sovereign CDS has had any effects in terms of market prices and of volatility of sovereign debt markets or investment by affecting the scope for hedging,

This assessment will require evaluation of statistics and, where possible, comparison of data before and after entry into application of the Regulation on 1st November 2012. More specifically, the statistical analysis would include:

i. An analysis of published short positions since the regime has entered into force;

ii. An analysis of volatility and price formation for shares and bonds, including spreads and news transmission, related to the size of published short positions;

iii. An analysis of the impact on securities lending behaviour provided that data are available;

iv. An analysis of the impact on settlement discipline;

v. An analysis of the impact of short selling bans adopted under the new regulation, if any;

vi. An analysis of the impact of the lifting of short selling restrictions adopted under the new regulation, if any.

ESMA would develop a baseline and appropriate benchmarks to try to measure the impacts mentioned above. It is acknowledged that there might be limitations to the exercise considering that it will be conducted soon after the Regulation enters into application and over a limited period of time and that relevant, accurate and reliable data may not be available in all instances (e.g. on securities lending).

In addition, ESMA would conduct a representative survey of market participants and competent authorities in order to answer the following questions:

i. whether reported information is sufficient for CAs to perform their functions, including monitoring and supervision of systemic risk, market stability and market abuse,

ii. whether published information is sufficient for market participants to better understand market dynamics,

iii. whether and to what extent the Regulation has affected non-financial actors, notably their need to hedge,

iv. whether there are possibilities for circumvention, notably through third countries,

v. whether the exemption for market makers allows for liquidity provision without undue circumvention,

vi. whether the thresholds set to identify a significant drop in the price of financial instruments are appropriate for all instruments, and whether (and if so how) thresholds should be set for significant price falls in UCITS and commodity derivatives,

vii. whether reporting mechanisms are operating efficiently.

4. Indicative timetable

The Commission is under the obligation to Report to the European Parliament and the Council by 30 June 2013.

The deadline set to ESMA to deliver the technical advice is **31 May 2013**.

Annex II -

Detailed quantitative analyses

This annex provides further details on the methodologies and data used to assess the quantitative impact of the Short Selling Regulation. It should be noted that the quantitative analysis presented in this final report is subject to three main caveats: first, there is only a short time span since the entry into force of the Regulation (about five months) and more data are needed to ensure that the results are robust and the sample periods representative; second, the methods used are subject to model risk and empirical limits that are outlined in this annex; lastly, despite the use of control groups and variables to isolate the effects of the Regulation, there is a risk that the analysis captures nonetheless certain external factors that may distort some of our results.

Analysis of published short positions

Background

The Regulation sets disclosure requirements for market participants holding short positions on European shares and sovereign bonds. Each market participant has to compute its net economic short position (i.e. including short positions through derivatives) in an asset at the end of each trading session.

A short position held on a share has to be notified to the relevant Competent Authority when it is equal to or greater than 0.2% of the issued share capital, and has to be publicly disclosed when it is equal to or greater than 0.5% of the issued share capital. The Competent Authority must be notified when an existing short position reaches, falls below or crosses the aforementioned thresholds. Additionally, any modification of an existing position of 0.1% or more must be notified.

The thresholds for notification of short positions held on sovereign debts are 0.1% when the total amount of issued debt outstanding is between 0 and EUR 500bn and 0.5% when the total amount of issued debt outstanding is greater than EUR 500bn. Short positions held on sovereign debts are not subject to public disclosure. In sum, a notification to a Competent Authority corresponds either to a "newly created" short position, or to a modification (change) of an existing one, which is the breakdown used below to analyse the data.

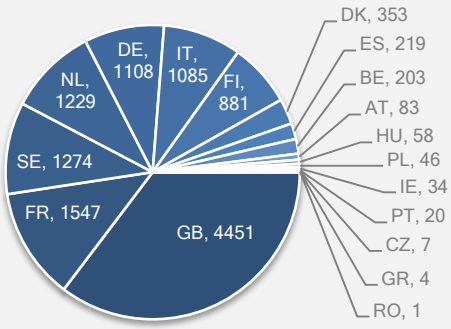
The Regulation provides for exemptions of market making activities which allow relevant entities to build short positions without being obliged to notify the relevant Competent Authority or to locate the financial instruments in case of short sales or to enter into uncovered sovereign CDS transactions without infringing the prohibitions set forth in the Regulation. Similar exemptions are provided for the operations by primary dealers in sovereign debt instruments. Both market makers and primary dealers have to notify the relevant Competent Authorities of their intention to use these exemptions for a particular instrument.

Descriptive statistics of short positions on shares

All notifications

Between 1 November 2012 and 28 February 2013, there were 12,603 notifications made to NCAs on 970 shares in 18 countries. They are split between 4,001 short positions and 8,602 modifications made to these positions. As shown in Chart A.01, the bulk of the notifications concerned shares under the UK CA's remit.

Number of notifications A.01

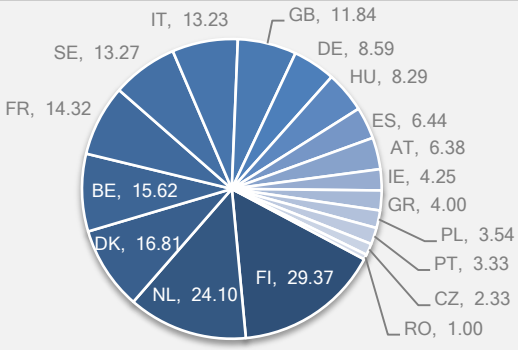


Note: Number of notifications , counted by Reporting Competent Authority, 1/11/2012 to 28/2/2013.
Sources: National Competent Authorities, ESMA.

Chart A.02 displays a relative measure of the short-selling activity under a given NCA's remit, computed as the total number of notifications received by a Competent Authority over the number of shares shorted. For instance, shares under FI CA's remit are subject to the most active short-selling activity, with an average of almost 30 notifications per share.

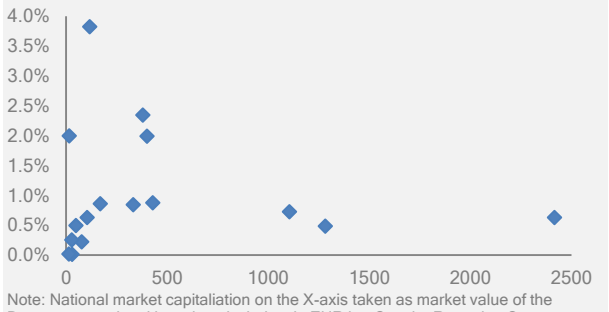
For the same purpose, Chart A.03 plots the average monetary equivalent of all short positions reported to a Competent Authority relatively to the corresponding national market capitalisation (see Box 1). On average, short positions add up to approximately 1% of a country's broad market capitalisation, including two outliers (IT and FI) for which they add up to 2.3% and 3.8% of the national market capitalisation. This confirms the relative importance of short-selling activities for shares under FI CA's remit.

Short-selling activity A.02



Note: Measure of average activity by share taken as the total number of notifications to a National Competent Authority over the number of shares notified to the same NCA in said notification, 1/11/2012 to 28/2/2013.
Sources: National Competent Authority, ESMA.

Total value of reported short positions A.03

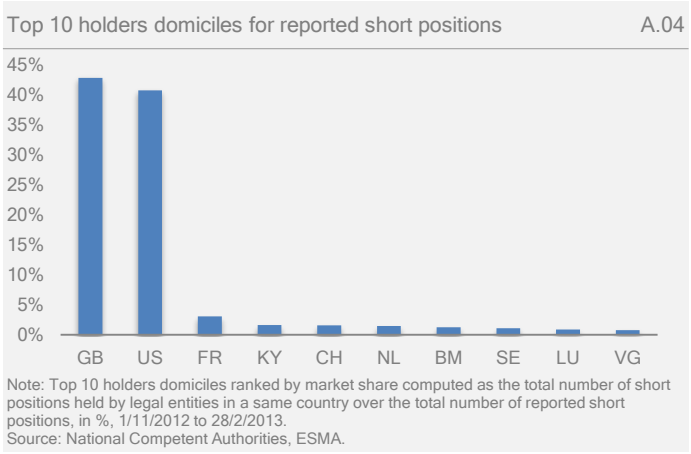


Note: National market capitaliation on the X-axis taken as market value of the Datastream national broad equity index, in EUR bn. Sum by Reporting Competent Authority of the monetary values of the average reported short positions by holder per issuer, in percentage of market capitalisation, on Y-axis, in %. One point by RCA. 1/1/2013 to 28/2/2013.
Sources: National Competent Authority, Datastream, ESMA.

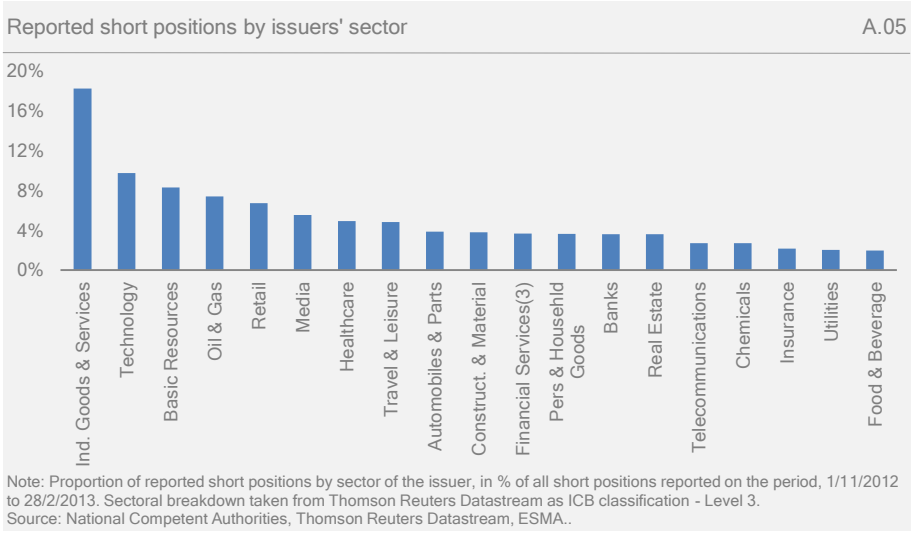
A total of 460 holders reported their positions to Competent Authorities during the period. The top ten holders accounted for 28% of all the reported short positions, indicating a significant degree of concentration. Otherwise, overall holdings of reported short positions were rather diluted, with 75% of holders having been short on seven different shares or fewer; only 15 market participants have been shorting 50 different shares or more, and four have been short on more than 100 shares. This suggests that relatively few players were actually using short-selling as an active strategy for their trading activities.

Holders are mostly composed of investment funds and asset managers, with only five banks included in the 50 biggest holders (in terms of number of different short positions). This low representation of banks among the most active short sellers might reflect the reporting exemptions available to market makers under the new SSR, as one could expect large financial institutions to fall into this category.

More than 83% of all reported short positions are held by entities domiciled in the UK or the US; Cayman Islands (KY) and Bermuda (BM) are also present in the top ten holders domicile (Chart A.04).



The shares the most subject to short-selling belonged to the Industrial goods and services sector (18.2% of all reported short positions), whereas 9.7% of all reported short positions were held on the Technology sector (the second most shorted sector) and 8.3% and 7.4% on the Basic resources and Oil & Gas sectors, respectively. Financials and Banks accounted for 3.6% of all reported short positions, each, and Insurances only for 2.1%. The remaining 47% are split among the 12 other different sectors (Chart A.05).



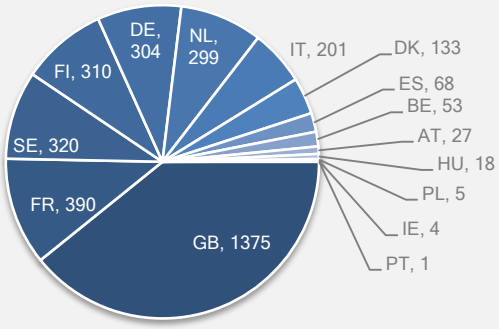
Notifications publicly disclosed

Between 1 November 2012 and 28 February 2013, there have been 224 holders publicly disclosing 1,090[22] short positions on 427 shares, for a total of 3,508[23] notifications. The bulk of the published notifications are from the UK, followed by FR and SE. (Chart A.06).

[22] This number stands for new short positions that were created "directly" above the threshold as well as existing short positions that were modified and crossed the threshold.

[23] This number stands for new short positions that were created "directly" above the threshold, as well as existing short positions that were modified and crossed the threshold (upwards or downwards), and any modification of an existing short position of 0.1% or more above the threshold.

Number of published short positions A,06

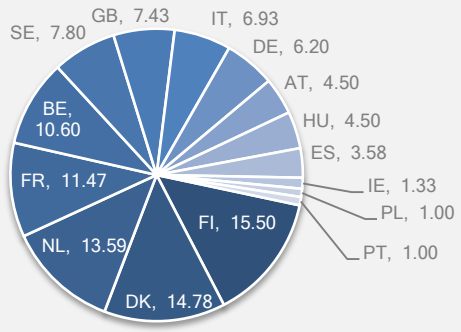


Note: Number of notifications published, by Reporting Competent Authority, 1/11/2012 to 28/2/2013.
Sources: National Competent Authorities, ESMA.

As evidenced by chart A.07, the average number of notifications by share is very high in FI and DK, confirming that short-selling on these shares is very active, i.e. either each share is shorted by a lot of different actors, or each short position taken on a share is modified very frequently.

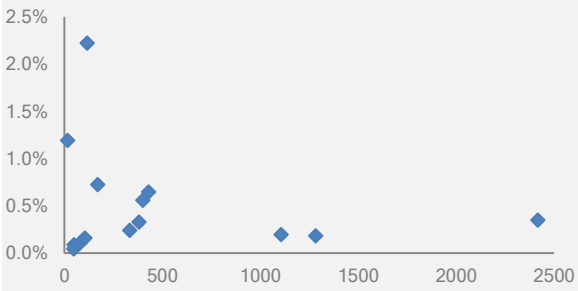
On average published short positions represented around 0.5% of a country's broad market capitalisation, including one outlier for whom they represented around 2.2% of the national market capitalisation (FI). The average size of published short positions was around EUR 52.1mn[24] and on average the total value of published short positions amounted to almost half the value of all short positions.

Short-selling activity above the public disclosure threshold A.07



Note: Measure of average activity by share taken as the total number of published notifications to a National Competent Authority over the number of shares notified to the same NCA in said published notification, 1/11/2012 to 28/2/2013.
Sources: National Competent Authority, ESMA.

Total value of published short positions A.08



Note: National market capitaliation on the X-axis taken as market value of the Datastream national broad equity index, in EUR bn. Sum by Reporting Competent Authority of the monetary values of the average published short positions by holder per issuer, in percentage of market capitalisation, on Y-axis, in %. One point by RCA. 1/1/2013 to 28/2/2013.
Sources: National Competent Authorities, Datastream, ESMA.

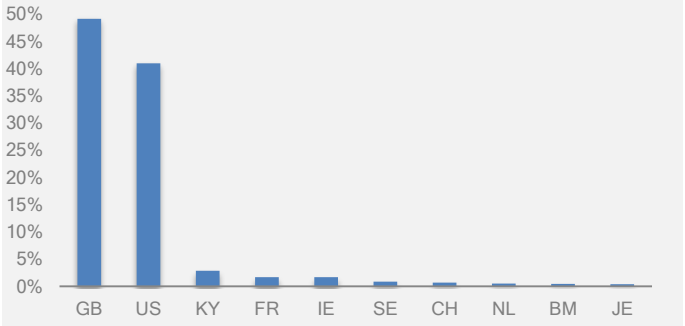
Box 1 : Details on charts A.03 and A.08

For each notification, we computed the equivalent amount of the position in EUR, using the equivalent amount in shares of the net economic short position and the close share price on that trading day. We then took the average size of each holders' short position (given that the size of a single position can change over time). Finally we take the sum of these average values for each Reporting Competent Authority. The equivalent amount in shares was not available for BE, and prices were not always available for the shares notified. We removed the short positions on a specific share under the DK CA's remit in order to obtain a consistent figure, as the amount shorted on that share represented almost 29% of the national market share (using our calculation method).

[24] See Box 1 for details on calculations.

The top-50 holders in terms of number of published net short positions also mostly included investment funds and asset managers and only three banks. 37% of the published notifications were from ten holders only. More than 90% of the published positions have been notified by entities domiciled in four countries belonging to the top-ten holders' domiciles.

Top 10 holders domiciles for published notifications A.09



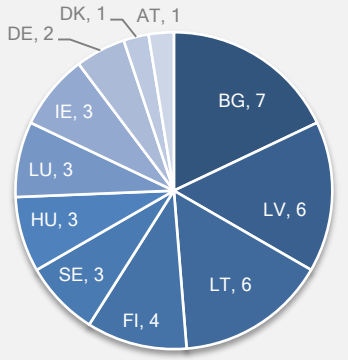
Note: Top 10 holders domiciles ranked by market share computed as the total number of published notifications by legal entities in a same country over the total number of published notifications, in %, 1/1/2012 to 28/2/2013.
Source: National Competent Authorities, ESMA.

Descriptive statistics of short positions on bonds

Between 1 November 2012 and 28 February 2013, there were 148 notifications made to NCAs on 13 sovereign issuers in 11 countries.

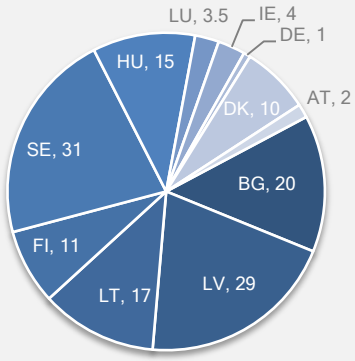
A total of 26 holders reported 39 short positions on EU sovereign debts. SE, LV and BG debts were subject to the most active short-selling.

Net economic short positions on EU sovereigns A.10



Note: Number of reported short positions on sovereign debt, by Reporting Competent Authority, 1/11/2012 to 28/2/2013.
Sources: National Competent Authorities, ESMA.

Number of notifications by sovereign issuer notified A.11



Note: Number of notifications on sovereign debt by Reporting Competent Authority, 1/11/2012 to 28/2/2013.
Sources: National Competent Authority, ESMA.

For illustrative purposes, the average size of short positions held on European sovereign debts was around EUR 2.89bn, while the average reported short position on shares amounted to around EUR 28.3mn[25].

To the same extent, a striking fact is the gap between the number of notifications received on shares (12,603) and the number of notifications received on sovereign debts (148). Therefore the low number of notifications received on sovereign debts, compared to the number of notifications received on shares,

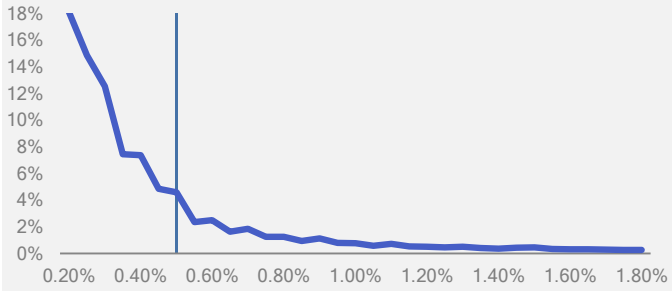
[25] Both numbers are to be compared very cautiously because short positions held on sovereign debts are duration adjusted. More precisely, the "cash" part of the position is adjusted by duration and the part of the position held through derivatives is delta-adjusted only.

might not accurately reflect the actual short-selling activity on these values. This might be due to the reporting thresholds set too high, or to the computation of duration-adjusted short positions on sovereign debts that makes them hard to reach.

Activity around the public disclosure threshold

A short position is to be publicly disclosed when it is equal to or greater than 0.5% of the issued share capital. We tried to assess whether market participants are averse to crossing this threshold. Chart A.12 displays the frequency of notifications given the size of the position reported. 75% of notifications fall between the thresholds [0.2%;0.5%[.

Frequency of notifications A.12



Note: Frequency of notifications by size of the positions notified, in % of total number of notifications. Truncated at 1.8% for readability purposes, therefore representing 96% of all notifications. The vertical line shows the public disclosure threshold (0.5%). 1/11/2012 to 28/2/2013.
Sources: National Competent Authorities, ESMA.

We analysed the frequency of movements around the public disclosure threshold and measured how often the threshold is crossed. Around one sixth of the short positions were reported directly above the 0.5% threshold; out of these, one in three was subsequently modified and fell under the 0.5% threshold at some point during the observed period. This suggests that at least some investors do not mind publicly reporting their position.

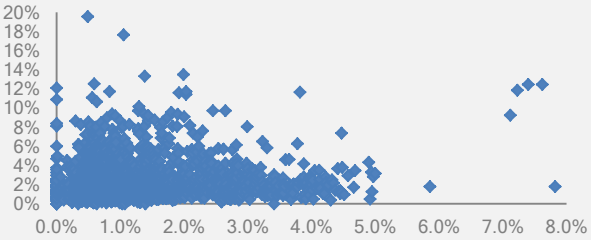
However, only 14.5% of the positions held below the 0.5% threshold moved above the threshold, among which half crossed it back. To the same extent, only one fourth of the positions reported close to 0.5%, and above 0.4%, crossed the public disclosure threshold. This may indicate some reluctance from market participants to disclose their short positions to the public.

Overall, it seems that market participants had a tendency to settle on one side or the other of the threshold and avoid crossing it. This would suggest that holders' behaviour is pre-determined, i.e. they decide from the beginning whether to go public on a given position or not, and do not change their mind. This would mean that the public disclosure threshold has an effect on short-selling activity, and even though no strict conclusion can be drawn from the available data, given that there was no consistent data before the entry into force of the Regulation, it is possible that some actors may prefer to stay below the 0.5% threshold and not to disclose information on their short-selling activity.

Size of short positions and volatility

The relationship between the size of published of short positions and volatility was analysed. There is no apparent link between the size of published short positions and volatility. For each published notification, the size of the realised position is plotted against the volatility of returns on the share notified over the following week (i.e. the next five trading days), in order to assess whether larger short positions imply greater volatility. As evidenced by chart A.13, there is no significant relationship between the extent to which a share is shorted and the volatility of its price.

Size of published short positions and volatility A.13



Note: Size of published short positions on the X-axis, % of issued share capital. Volatility of daily returns on the share notified, computed over the five trading days following the realisation of the short position, on Y-axis, in %. One point by notification. 1/11/2012 to 28/2/2013.
Sources: National Competent Authorities, Datastream, ESMA.

Assessment of market conditions following the entry into force of the Regulation

Background

The Regulation aims to limit the risks usually associated to uncovered short sales. However, by constraining short-selling activities the Regulation could be expected to hamper their recognised positive properties as described below.

Liquidity
The disclosure requirements and the 'locate plus' rule may make it more complicated for market participants to realise short sales. Buyers and sellers on financial markets usually have complementary views of the future, i.e. the former expect prices to increase while the latter expect a decline in prices. By constraining short-selling activity, the Regulation might hamper liquidity conditions by lowering the number of counterparties on the sell-side, hence lead to lower volumes of transactions.

Volatility
The expected effects of short sales restrictions on volatility are ambiguous. Miller (1977) provides a model in which investors have heterogeneous beliefs about individual stocks' true valuations. Therefore, short-selling constraints drive investors with "pessimistic" views away from the market and result in overvalued prices as only "optimistic" investors engage in trading, in the end leading to lower volatility (the higher the price, the smaller the standard deviation of returns). However, according to Bai's et al., (2006) short-selling limitations can lead to higher volatility as better informed investors are kept out of the market and less informed investors perceive the risk as considerably higher.

Price formation
The concept of price discovery, or price formation, relates to the efficiency of asset prices in incorporating new information and reflecting all existing information. Restrictions on short sales might lead to some market participants with "downward" views on an asset (i.e. expecting a decline in price) to be excluded from the market. Assuming that investors are well-informed, the resulting asset price would be biased upwards as "negative" information is not accounted for as quickly. Therefore we expect restrictions on short sales to potentially slow down the price discovery process as negative views have to be expressed through regular sales which take more time to realise.

Data

A sample of 100 EU stocks is constructed from a set of 1,000 stocks that were ranked by market capitalisation and from which we randomly drew 25 stocks in each quartile in order to embed shares with different liquidity characteristics. The same method is applied on 1,000 US stocks that constitute control group. A list of the stocks selected in the sample is provided in table AT.01.

In order to study liquidity, volatility and price formation daily data is downloaded from Thomson Reuters Datastream on close prices, close bid and ask prices, volumes of transactions (in number of shares traded) and the price indices of the Datastream national broad equities indices as well as the Datastream European broad equities index. The data runs over ten months, five before the implementation of the SSR and five since it was put in place (from the end of May 2012 to the start of April 2013).

Methodology

The impact of the SSR is assessed using the difference-in-differences methodology (see Box 2). The aim is to compare a group of shares impacted by the Regulation to a group of shares that were not impacted. The former is called "treatment group" and the latter "control group". We compute the difference in the average values of a given outcome before and after the regulation for both groups, and then compute the difference of these differences between the groups. Provided the two groups have comparable intrinsic features, this method allows us to isolate the net effect of a treatment, i.e. the Regulation in our case.

Results

Liquidity

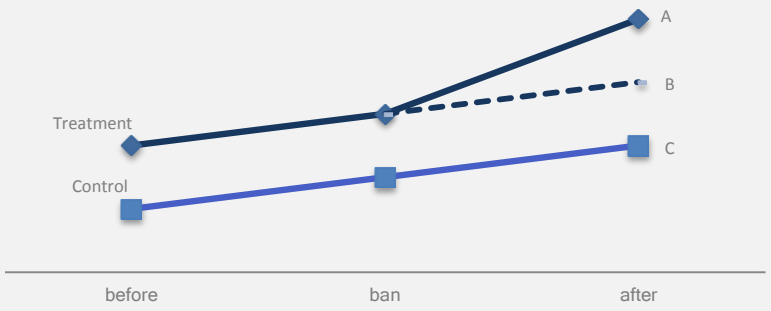
For that exercise the difference-in-differences methodology is used on three different measures of liquidity (see Boxes 2 and 3). The coefficient of interest is the estimate on the 'Effect' variable. The results of the estimations are summed up in Table AT.02.

Box 2: The difference-in-differences estimation method

In the context of experimental sciences, the effect of a treatment can be observed directly by comparing the outcome in the treated group to the outcome in a perfectly randomly selected control group of non-treated subjects, since the randomization process insures that the two groups have no systematic differences. In other terms, the control group behaves as the treatment group should have in absence of treatment, thus enabling a robust comparison and evaluation of the treatment effect. In the context of social sciences, where experimental conditions are almost never fulfilled, various methods try to find equivalent to "treatment" and "control" groups; the difference in differences is one of them.

For assessing the impact of a ban on uncovered EU sovereign CDS, the treatment group is the European Union. A perfect control group would be a group of countries identical to the EU, but where no ban was introduced. The idea that unobserved variables will impact the two groups similarly is a strong assumption that is hardly ever met, but the "diff-in-diff" procedure allows to relax this restriction by choosing a control group with unobserved differences (however, these differences are constant over time).

Difference-in-differences: Stylized principle B.01



Suppose, as illustrated in Chart B.01, that there are three data points for each group: one before the ban, one when the ban is introduced and one after the ban. In the case of experimental data, the impact of the ban would be the simple difference A-C, based on the very restrictive assumption that the differences between the two groups are only due to the ban. With the relaxed assumption of unobserved differences that are constant over time, the effect of the ban will be the difference A-C, minus what will capture the unobserved difference B-C, thus the difference-in-differences estimator (A-C)-(B-C)=A-B.

With more than three observations, a way to implement this is simply to compute the expected value, or the mean, of the two groups before and after the ban. But one interesting feature of this method is that it can be used in a regression. This offers the possibility to add variables that will capture unobserved effects, thus reducing the scope of unobserved differences. Since unobserved differences, which are likely to vary over time, are the main source of bias in this procedure, the choice of the control variables is crucial to evaluate the impact of the treatment.

Composition of the samples			AT.01
Treatment group (EU)			
Most liquid (Q4)	Q3	Q2	Less liquid (Q1)
BARCO NEW	XING	BANCO POPOLARE	BANKINTER 'R'
BEKAERT (D)	CARL ZEISS MEDITEC	ENEL GREEN POWER	MSET.ESP.COMUNICACION
AGEAS (EX-FORTIS)	BAYWA	ENEL	ACS ACTIV.CONSTR.Y SERV.
UCB	FUCHS PETROLUB PREF.	ASSICURAZIONI GENERALI	GRIFOLS
ANHEUSER-BUSCH INBEV	TAG IMMOBILIEN	NIEUWE STEEN INV.	ENAGAS
SOLVAY	AXEL SPRINGER	BINCKBANK	ABERTIS INFRAESTRUCTURAS
TRIGANO	RATIONAL	VASTNED RETAIL	CAIXABANK
SC.FONFNC.ET DE PARTS.	KABEL DEUTSCHLAND HLDG.	ARCADIS	REPSOL YPF
ALTRAN TECHNOLOGIES	WACKER CHEMIE	CSM CERTS.	BBV.ARGENTARIA
PIERRE & VACANCES	SUEDZUCKER	APERAM	GO-AHEAD GROUP
IPSOS	DEUTSCHE POSTBANK	ZIGGO	CRANSWICK
RUBIS	DEUTSCHE POST	BOSKALIS WESTMINSTER	SHANKS GROUP
NEXANS	SIEMENS	RANDSTAD HOLDING	BEAZLEY
AIR FRANCE-KLM	INDEPENDENT NEWS & MEDIA	UNILEVER CERTS.	KPN CON
WENDEL	KINGSPAN GROUP	ROBECO	COOKSON GROUP
AREVA	BANK OF IRELAND	REED ELSEVIER (AMS)	DOMINO'S PIZZA GROUP
ARKEMA	PADDY POWER	DSM KONINKLIJKE	SCHRODERS
EIFFAGE	KERRY GROUP 'A'	BANCO COMR.PORTUGUES 'R'	DERWENT LONDON
KLEPIERRE	ITALMOBILIARE	CIMENTOS DE PORTL.SGPS	PERSIMMON
SODEXO	REPLY	PORTUGAL TELECOM SGPS	WHITBREAD
VIVENDI	GEOX	JERONIMO MARTINS	SMITH (DS)
BNP PARIBAS	DE LONGHI	EDP ENERGIAS DE PORTUGAL	AGGREKO
RIB SOFTWARE	RECORDATI INDUA.CHIMICA	SACYR VALLEHERMOSO	ROYAL DUTCH SHELL B
KHD HMB.WDG.INTL.	BANCA PPO.EMILIA ROMAGNA	GAMESA CORPN.TEGC.	SHIRE
NORMA GROUP	PARMALAT	OBRASCON HUARTE LAIN	REED ELSEVIER
Control group (US)			
Most liquid (Q4)	Q3	Q2	Less liquid (Q1)
DOMINION RES.	HOLLYFRONTIER	ALLEGHANY	FRESH MARKET
HESS	DOVER	WILLIS GROUP HOLDINGS	TANGER FAC.OUTLET CNTRS.
XCEL ENERGY	NXP SEMICONDUCTORS	MICRON TECHNOLOGY	WPX ENERGY
CAPITAL ONE FINL.	REPUBLIC SVS.'A'	OCEANEERING	CVR ENERGY
COVIDIEN	FOREST LABS.	MOHAWK INDS.	ROLLINS
BRISTOL MYERS SQUIBB	CHECK POINT SFTW.TECHS.	RESMED	APOLLO GP.'A'
EBAY	MICHAEL KORS HOLDINGS	TRW AUTV.HDG.	LANDSTAR SYSTEM
GOOGLE 'A'	ONEOK PARTNERS	COMERICA	TWO HARBORS INVESTMENT
MONDELEZ INTERNATIONAL CL/	DISCOVERY COMMS.'A'	CBRE GROUP CLASS A	ENERGEN
PHILLIPS 66	DELTA AIR LINES	PINNACLE WEST CAP.	SMITHFIELD FOODS
CME GROUP	CERNER	ASHLAND	TELEDYNE TECHS.
AIR PRDS.& CHEMS.	ROYAL CARIBBEAN CRUISES	QUANTA SERVICES	SOTHEBY'S
PUBLIC STORAGE	CINCINNATI FINL.	MASCO	ASSURANT
WALMART STORES	PULTEGROUP	HERTZ GLOBAL HDG.	CREDIT ACCEP.
GENERAL GW.PROPS.	PAYCHEX	OGE EN.	CHICO'S FAS
INTUIT	WYNN RESORTS	IHS 'A'	HIGHWOODS PROPS.
CENTURYLINK	ANSYS	FOSSIL	BABCOCK & WILCOX
DELL	TRIMBLE NAVIGATION	CONSTELLATION BRANDS 'A'	SANDRIDGE ENERGY
COCA COLA	NYSE EURONEXT	EVEREST RE GP.	SUPERIOR ENERGY SVS.
UNITED PARCEL SER.'B'	HUMANA	ROYAL GOLD	MADISON SQ.GARDEN CL.A
ANNALY CAPITAL MAN.	REGIONS FINL.NEW	UNUM GROUP	ATHENAHEALTH
WILLIAMS PARTNERS	ENERGY TRANSFER PTNS.	WINDSTREAM	DOUGLAS EMMETT
STATE STREET	ADV.AUTO PARTS	LEUCADIA NATIONAL	ATMEL
PPL	COVENTRY HEALTHCARE	TOLL BROS.	ATWOOD OCEANICS
PPG INDUSTRIES	CONSOL EN.	AUTOLIV	KAR AUCTION SERVICES

Box 3: Methodology and measures of liquidity

We use the panel OLS technique to regress our measures of an outcome on a constant and three dummy variables named Group, SSR and Effect. The first takes a value of 1 for all shares in the treatment group (i.e. European shares) and 0 for the shares in the control group (i.e. US shares) in order to capture the common trend for shares belonging to the same group; the second takes a value of 1 for all shares after 1 November 2012 and 0 otherwise in order to capture a common time trend; finally the third takes a value of 1 for European shares after 1 November 2012 and 0 otherwise. The coefficient estimate on the Effect dummy gives us the net effect of the regulation on liquidity.

The equation to be estimated is specified in the form of a modified difference-in-differences:

$$y_{it} = c + \alpha.Group + \beta.SSR + \gamma.Effect + \varepsilon_{it}$$

With y_{it} the measure of the outcome of interest for stock *i* on day *t*, *c* a constant, ε_{it} are the residuals clustered at the stock level.

β is the coefficient of interest.

For the impact assessment on liquidity, three different measures are used successively as the dependent variable:

- The daily quoted percentage bid-ask spreads computed as follows:

$$Spread = \frac{A - B}{(A + B)/2}$$

With A the daily ask price and B the daily bid price at market close.

- The daily share volume of transactions taken as a natural logarithm, in order to harmonise scales
- The natural logarithm of an illiquidity measure inspired from the Amihud's illiquidity ratio computed as follows:

$$Illiquidity = \frac{|R|}{(P.Volume)}$$

With $|R|$ the absolute value of the daily return, P the daily close price and *Volume* the daily volume of transactions.

Percentage bid-ask spreads and transaction volumes are rather straightforward indicators of liquidity; as for Amihud's illiquidity ratio, it is broadly used in the literature as a proxy for liquidity conditions (see for instance Beber and Pagano (2013) and Hou and Moskowitz (2005)).

Every regression is estimated with White's standard errors and covariance matrix, assuming that the error terms can be serially correlated over time but not between cross-sections (i.e. between shares); this correction is needed in order for the statistical tests to be valid.

Robustness checks are carried out for each liquidity regression through the introduction of control variables.

In the "spread" regressions we control for the transactions volumes (taken as a natural logarithm) and for stock-level volatility computed as the standard deviation of the daily returns over the last 20 trading days. In the "volumes" and "illiquidity" regressions we control for stock-level volatility and bid-ask spreads.

Additional robustness checks are performed through modifying the estimation period, i.e. taking longer timespans before the introduction of the SSR.

Impact of the SSR on the liquidity of shares AT.02

	Measure of liquidity (dependent variable)		
Explanatory Variables	Bid-Ask spread	Volume	Illiquidity measure
Constant	0.0005***	7.3468***	-2.0083***
Group	0.0066***	-1.971***	2.67***
SSR	0.0018***	0.0143	-0.2390***
Effect	-0.0031***	0.0154	-0.1178**
Adjusted R^2	0.05	0.16	0.21

Sources: Thomson Reuters Datastream, ESMA calculations.
Note: *** and ** indicates that the parameter is significant at the 1% and 5% confidence level, respectively.

The coefficient of interest is statistically significant and negative for the "spreads" and the "illiquidity" regressions.

The first indicator shows that the Regulation was followed by a decrease in bid-ask spreads, which corresponds to an improvement in market liquidity. This result seems confirmed by our various robustness checks (see Box.3). To the same extent, the estimation of the third equation indicates a decrease in the illiquidity index after the entry into force of the Regulation, synonym of improved liquidity conditions. However this result does not hold when control variables are introduced.

The estimation on volumes yields a positive but statistically non-significant coefficient, meaning that the entry into force of the Regulation did not have any significant impact on transaction volumes. This result holds across every specification.

Therefore, there is no clear conclusion on the effect of the Regulation on liquidity, as its implementation seems to have reduced the Bid-Ask spreads, but no effect was found on the volumes of transactions, and the negative impact on the Amihud's illiquidity ratio is not robust.

Volatility

This part of the study compares the volatility of returns before and after the implementation of the Regulation for EU stocks with respect to a control group, following the methodology described in Box.3. The result is shown in Table AT.03.

Impact of the SSR on the volatility of returns AT.03

Explanatory variables	Volatility
Constant	0.0173***
Group	0.0034***
SSR	-0.0022***
Effect	-0.0012***
Adjusted R^2	0.05

Sources: Datastream, ESMA calculations.
Note: *** indicates that the parameter is significant at the 1% confidence level.

The estimation yields conclusive results and shows a statistically significant negative coefficient of interest, meaning that the volatility of returns on EU stocks decreased by around 0.12% after the new Regulation was implemented.

Price formation

We compute a measure that proxies the speed of price discovery (see Box.4) and apply the same method as for volatility analysis. The result is shown in Table AT.04.

Impact of the SSR on price formation AT.04

Explanatory variables	Price delay
Constant	0.2295***
Group	0.0547***
SSR	0.1469***
Effect	0.0297***
Adjusted R^2	0.08

Sources: Datastream, ESMA calculations.
Note: *** indicates that the parameter is significant at the 1% confidence level.

The estimate of the coefficient of interest is positive and statistically significant, meaning that the speed of price discovery deteriorated further for EU stocks than for US stocks after the implementation of the Regulation. This result still holds when using an alternative measure of price formation (see Box.4). According to our estimate, price discovery slowed down by 3% more for EU stocks than for US stocks. This represents a net increase of around 10% compared to the average speed of price discovery before the Regulation.

Conclusions

In light of the quantitative exercise undertaken, it seems that the entry into force of the Regulation had mixed effects on liquidity conditions for EU stocks, as we can observe seemingly lower bid-ask spreads but not clear effect on the two other indicators of liquidity, the former being usually considered as a sign of better liquidity characteristics. Moreover, the entry into force of the Regulation was followed by a slight decrease in the volatility of returns on EU equities. Finally, there seems to be a negative impact of the new regulation on the price formation process.

Box 4: Measuring price formation

Drawing on the study by Boehmer and Wu (2013), a measure of price delay is computed as a proxy for the speed of price discovery, i.e. the efficiency of prices in incorporating new market-wide information. The idea here is to assess the extent to which past market-wide information matters for the formation of prices once contemporaneous information is accounted for.

The first step is to estimate the following equation:

$$r_{i,t} = c + \beta_i R_{m,t} + \sum_{n=1}^{4} \delta_{i-n} R_{m,t-n} + \varepsilon_{i,t}$$

With $r_{i,t}$ the return on stock *i* in week *t*, *c* a constant, $R_{m,t}$ the return on the corresponding broad national equity market index *m* in week *t*, $R_{m,t-n}$ the return on national market index *m* lagged *n* weeks and $\varepsilon_{i,t}$ the error term. In sum, the weekly returns of a stock are regressed on the weekly market return of the same week and of the past four weeks. This is the unrestricted model.

Then the same equation is estimated using only the contemporaneous weekly market return, i.e. setting all the δs to 0. This is the restricted model.

Finally the price delay measure is constructed as follows:

$$Delay = 1 - \frac{R^2(restricted\ model)}{R^2(unrestricted\ model)}$$

The idea of that in a perfectly efficient market this measure should be 0, i.e. the inclusion of past market returns would not help explaining contemporaneous stock returns better. Therefore the higher the price delay measure, the worse the price formation process.

Delay is computed for each stock in the sample (both treatment and control groups) over two periods, i.e. the five months before the Regulation and the five months after it was implemented. Then the difference-in-differences approach is used to assess the impact of the regulation on this measure of price formation.

As a robustness check, another proxy for price formation is used as the dependent variable. Drawing on the method used by Pagano and Beber (2013), the speed of price discovery is measured through the first-order autocorrelation coefficient of the residuals of a market model, i.e. the autocorrelation in the $\varepsilon_{i,t}$ of the restricted model presented above. The same reasoning applies, the higher the autocorrelation in the residuals, the slower the price discovery process.

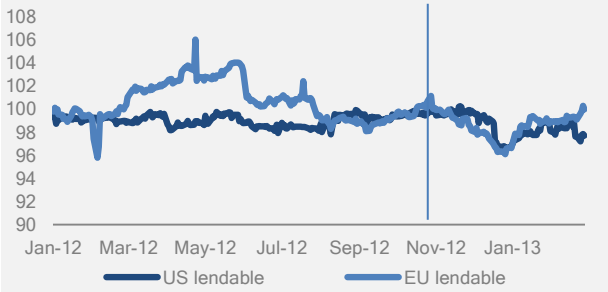
Assessment of securities lending market following the entry into force of the Regulation

Background

According to the Regulation, there are additional requirements for market participants willing to borrow stocks, known as 'locate rules', especially for stocks that are 'not easy to borrow'. In stylised terms, stocks are either 'easy to borrow' (MiFID liquid stocks, constituents of the main equity index in each EU country and stocks which are the underlying of derivatives) or not. In both cases, a market participant who wants to sell a stock short should first locate the stock it wants to borrow. In particular, for stocks that are not easy to borrow, the market participant should have a confirmation that the securities have been put on hold. This applies before selling the stock short, even if in the end the short sale does not take place.

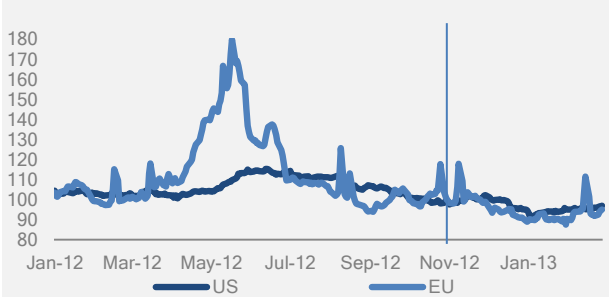
As shown in Chart A.14, securities lending markets activity, measured by the number of lendable equities, declined in the EU after the 1 November 2012, along with its US counterpart. This trend is also mirrored in Chart A.15 [26] which shows that the number of securities on loan declined steadily after 1 November 2012.

Securities lending: decline in lendable quantity A.14



Note: Quantity of stocks that are lendable, 100=1/1/2012.
Sources: Markit, ESMA.

Securities lending: decline in securities on loan A.15



Note: Quantity of stocks on loan, 100=1/1/2012.
Sources: Markit, ESMA.

Empirical hypothesis and methodology

According to feedback from market participants, the locate rule hampers securities lending, leading to a decline in activity. As stocks need to be put on hold, other participants are unable to borrow the stock. This could result in crowding out effects, if the potential borrower decides not to sell the stock short in the end, implying that stocks put on hold would have been idle. Therefore, it was assumed that after the Regulation went into force in November 2012 (i) securities lending activity on illiquid stock would decline, (ii) activity on stocks easy to borrow would also decline, but at a slower pace given that constraints are less stringent (no put on hold requirement).

This hypothesis is tested by using a difference-in-difference approach: changes in the activity on securities lending market in the EU ('treatment group') are compared to changes in non-EU countries ('control group').

Then the model estimates if the difference in activity between the two groups has significantly changed before and after the regulation.

$$X_{i,t} = \alpha + \beta Group + \mu SSR + \lambda Effect + \varepsilon_{i,t}$$

Where $X_{i,t}$ is an indicator of activity in the securities lending market for country i, $Group$ is a dummy variable that equals 1 if the country is in the EU (treatment group) and 0 otherwise, SSR is a dummy that equals 1 from the 1 November 2012 on, $Effect$ is the variable of interest that combines the $Group$ and SSR dummies (it equals 1 for EU countries from 1 November 2012 on) and $\varepsilon_{i,t}$ is an error term.
According to the hypothesis, λ is expected to be significant and negative for stocks that are not easy to borrow. That means that the activity has been significantly reduced compared to the previous period and

[26] The spike in stocks on loans in Europe in May relates to the dividend season.

the control group. If the parameter is not significant, then the measure has no impact; if it is positive and significant, this implies that the measure led to an increase in activity.

To sum up, the hypothesis is twofold:

- $\lambda_{Not\ easy\ to\ borrow} < 0$; and
- $\lambda_{Not\ easy\ to\ borrow} < \lambda_{Easy\ to\ borrow} < 0$

Data used and limitations of the approach

Data on securities lending activity is retrieved from Markit, the main provider in the market. Aggregate data has been downloaded for EU and non-EU countries split by categories: (i) Shares in the main index, (ii) others shares and (iii) mid-cap (for some countries). The data refers to lendable quantity of stocks and number of stocks on loan[27] on a daily basis between 1 January 2012 and 28 February 2013. The following countries are included in the sample: AT, BE, DE, DK, ES, FI, FR, GR, IE, IT, NL, NO, PT, SE and UK in the 'treatment group' and US in the 'control group'.

The approach used has however some limitations:

- The sample is small in terms of tine series with only four months of data after the ban but up to five years before the ban. This can be solved by using a balanced sample with equal size before and after the ban, but it may also introduce some biases if the regulation has led to changes in the behaviour of market participants before the ban.
- There are no control variables in the equation, implying that all the idiosyncratic features are taken into account by the parameter of the dummy variable.
- The choice of the control group can have an impact if the countries in the control group are not similar to the treatment group and if there have been subject to specific events during the observation period (regulations for example).

Empirical results

For lendable quantities, econometric tests show that the Regulation has had a significant negative impact on the activity. For stocks that are not 'easy to borrow', the entry into force did have a negative impact for all EU countries. In other words, the reduction in lendable stocks following the Regulation was higher than what was observed in the control group. The impact was smaller for large EU countries (UK, FR, DE, IT, ES) than for smaller countries (AT, DK, GR, PT, IE). The results are qualitatively similar for stocks that are easy to borrow, however the absolute effect is smaller, as expected.

Change in lendable quantities not 'easy to borrow' AT.05

Country	Vs US		Vs US
EU	-1.42***	DK	-7.95***
UK	-0.55***	FI	-4.48***
FR	-5.19***	GR	-7.95***
DE	-2.91***	IE	-6.26***
IT	-2.28***	NO	-3.75***
NL	-5.02***	PT	-6.89***
AT	-6.52***	ES	-3.92***
BE	-4.90***	SE	-2.96***

Sources: Markit, ESMA calculations.
Note: *** indicates that the parameter is significant at the 1% level.

Change in lendable quantities 'easy to borrow' AT.06

Country	Vs US		Vs US
EU	-0.51***	DK	-4.88***
UK	-1.70***	FI	-3.85***
FR	-2.76***	GR	-6.45***
DE	-2.73***	IE	-3.93***
IT	-1.94***	NO	-3.67***
NL	-2.88***	PT	-4.14***
AT	-5.20***	ES	-2.76***
BE	-4.37***	SE	-2.83***

Sources: Markit, ESMA calculations.
Note: *** indicates that the parameter is significant at the 1% level.

[27] Volume rather than value data was used as the value data is in USD and therefore biased by changes in the EUR-USD exchange rate and also by changes in market prices. On the other hand, using volumes data implies that corporate events (mergers, stock splits etc.) could have an impact on the volumes of stocks.

For quantities on loan, the results show that there was a significant decline after the entry into force of the Regulation. The results are qualitatively similar for stocks that are easy to borrow, however the absolute effect is smaller, as expected.

Change in quantities on loan not 'easy to borrow' AT.07

Country	Vs US		Vs US
EU	-1.42***	DK	-7.95***
UK	-0.55***	FI	-4.48***
FR	-5.19***	GR	-7.95***
DE	-2.91***	IE	-6.26***
IT	-2.28***	NO	-3.75***
NL	-5.02***	PT	-6.89***
AT	-6.52***	ES	-3.92***
BE	-4.90***	SE	-2.96***

Sources: Markit, ESMA calculations.
Note: *** indicates that the parameter is significant at the 1% level.

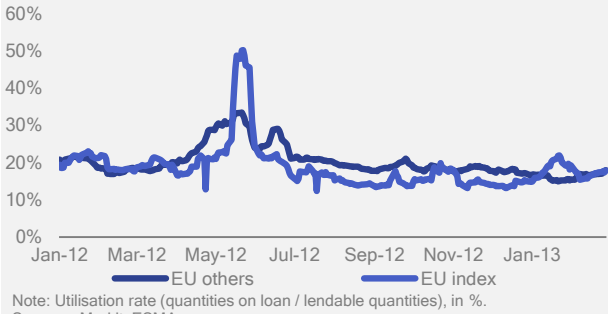
Change in quantities on loan 'easy to borrow' AT.08

Country	Vs US		Vs US
EU	-0.51***	DK	-7.08***
UK	-0.09***	FI	-3.85***
FR	-2.76***	GR	-6.45***
DE	-2.73***	IE	-3.93***
IT	-1.94***	NO	-3.67**
NL	-2.88***	PT	-4.14***
AT	-5.20***	ES	-2.76***
BE	-4.37***	SE	-2.83***

Sources: Markit, ESMA calculations.
Note: *** indicates that the parameter is significant at the 1% level.

The impact of the locate rule was also estimated by looking at the utilisation rate (i.e. quantities on loan divided by lendable quantities). In particular, it is expected that the utilisation rate should increase after the entry into force of the Regulation given the relative scarcity of lendable stocks. However, empirical evidence is mixed (Chart A.16 and Table AT.09). For stocks that are not easy to borrow, the utilisation rate has increased for some countries, but has decreased in others.

Securities lending: decline in utilisation rate in the EU A.16



Note: Utilisation rate (quantities on loan / lendable quantities), in %.
Sources: Markit, ESMA.

Change in utilisation of stocks not 'easy to borrow' AT.09

Country	Vs US		Vs US
EU	0.03***	DK	-0.15***
UK	-0.05***	FI	-0.01***
FR	0.04***	GR	-0.13***
DE	0.00***	IE	-0.12***
IT	0.04***	NO	0.07***
NL	-0.05***	PT	NS
AT	-0.05***	ES	0.18***
BE	-0.09***	SE	0.05***

Sources: Markit, ESMA calculations.
Note: *** indicates that the parameter is significant at the 1% level.

The impact of the locate rule on the utilisation rate has been positive for almost all countries with regard to shares that are 'easy to borrow', with the only exception of UK. It appears that the impact has been large for those stocks than those that are subject to more stringent locate rules, contrary to expectations.

Change in utilisation rate of stocks 'easy to borrow' AT.10

Country	Vs US		Vs US
EU	0.14***	DK	0.09***
UK	-0.02***	FI	0.38***
FR	0.20***	GR	0.05***
DE	0.13***	IE	-0.00***
IT	0.16***	NO	0.21***
NL	0.05***	PT	0.38***
AT	0.20***	ES	0.20***
BE	0.09***	SE	0.06***

Sources: Dataexplorer, ESMA calculations.
Note: *** indicates that the parameter is significant at the 1% level.

Robustness checks

The robustness of the results was checked by changing the size of the sample by using a balanced sample (same number of days before and after the ban). The results are broadly identical.

Change in quantities on loan of stocks 'easy to borrow' AT.11

Lendable quantities		Quantities on loan	
Region	Balanced sample	Region	Balanced sample
EU not easy to borrow	-1.45*** [-1.42***]	EU not easy to borrow	-1.45*** [-1.41***]
EU index	-0.48*** [-0.51***]	EU index	-0.48*** [-0.51***]

Sources: Dataexplorer, ESMA calculations.
Note: *** indicates that the parameter is significant at the 1% level. Numbers in brackets refer to the main estimation.

Conclusion

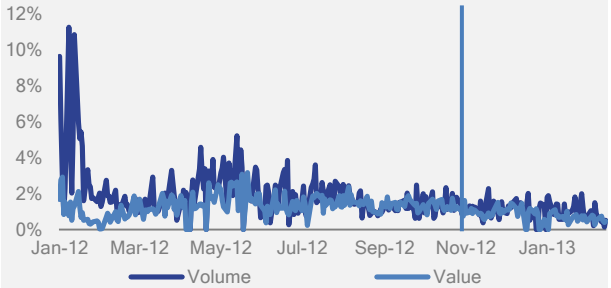
Notwithstanding the caveats of the approach used, empirical evidence shows that the Regulation may have had a negative impact on both lendable quantities and quantities on loan, but no significant impact on the utilisation rate.

Assessment of settlement fails following the entry into force of the Regulation

Background

According to the Regulation, the locate rule should improve settlement and therefore lead to a decrease in settlement fails on European equities. As illustrated in Chart A.17, settlement fails on equities seem to have decreased since the entry into force of the Regulation. However, the series shown in the chart refer to the median value of settlement fails which is not entirely reliable due to significant differences surrounding the definition of settlement fails among countries. Moreover, the data do not cover all settlement fails as it only covers data collected from Central Counterparties.

Settlement fails have decreased since the Regulation A.17



Note: % of settlement fails on European equities based on volumes and value.
Sources: Competent Auhtorities, ESMA.

Empirical hypothesis and methodology

The hypothesis is that if the Regulation had no impact, then the pre- and post-Regulation data on settlement fails should be on average equal. One of the limitations of this approach is that there is no control group, due to data limitations and no control variables. Therefore, if changes in settlement fails are linked to a third factor, this may not be taken into account.

The daily data used come from Competent Authorities and covers the period 1 January 2012 to 15 February 2013.

Equities

Based on the value of settlement fails, as indicated in Table AT.12, significant differences were observed in most countries. For the EU median and six individual countries there were fewer settlement fails after the entry into force into of the Regulation; for six others there were no significant changes; and for the last two countries, there were more settlement fails after the Regulation.

Average settlement fails before and after the Regulation (% value) AT.12

Country	Change between before and after the Regulation (percentage points)	T-stat	Significant difference
EU (median)	-1.0%	5.64***	YES
EU (median, balanced sample)	-0.4%	4.97***	YES
A	-0.5%	0.66	NO
B	-1.9%	4.21***	YES
C	+3.7%	-3.68***	YES
D	-0.3%	0.26	NO
E	0.0%	0.26	NO
F	0.0%	-0.01	NO
G	+0.1%	-1.29	NO
H	-1.0%	7.08***	YES
I	-4.7%	3.78***	YES
J	0.0%	0.29	NO
K	0.0%	0.40	NO
L	-2.2%	7.51***	YES
M	0.0%	-4.32***	YES
N	-1.7%	6.37***	YES
O	-1.9%	8.19***	YES

Note: *** indicates that the parameter is significant at the 1% level.
Sources: Competent Authorities, ESMA calculations.

For settlement fails based on volumes, empirical tests are broadly similar: There were fewer settlement fails for the EU median and six other countries, more settlement fails in one country and no significant changes for the other countries for which data before and after the Regulation was available.
The results are robust to changes in the sample period as indicated by the tests ran on a balanced sample (e.g. with as many points before and after the entry into force of the Regulation).

Average settlement fails before and after the Regulation (% of volume) AT.13

Country	Change between before and after the Regulation (percentage points)	T-stat	Significant difference
EU (median)	-0.5%	7.73***	YES
EU (median, balanced sample)	-0.5%	10.68***	YES
A	-1.3%	11.40***	YES
B	+0.5%	-0.66	NO
C	-0.5%	1.09	NO
D	-0.3%	1.43	NO
E	0.0%	0.26	NO
F	-0.5%	9.19***	YES
G	-2.8%	2.55**	YES
H	-0.1%	0.69	NO
I	-1.4%	9.92***	YES
J	+0.1%	-2.68***	YES
K	-0.3%	3.69***	YES
L	-0.7%	2.68***	YES

Note: *** and ** indicate that the parameters are significant at the 1% level and 5% level, respectively.
Sources: Competent Authorities, ESMA calculations.

Sovereign bonds

For sovereign bonds, empirical evidence shows that settlement failures have decreased after the entry into force of the Regulation, with a decrease of around 0.4 percentage points for settlement fails in percentage of volumes and 0.1 percentage points for fails based on value (Table AT.14). The results are robust to change in the time period for data on volumes, as using a balanced sample (i.e. with as many points before and after the entry into force of the Regulation) leads to the same results. For data on settlement fails in percentage of the value, using a larger sample from 1 January 2012 to end February 2013, the entry into force of the Regulation did not result in any significant change. However, the data is potentially biased at the beginning of the period, given that at that time the data collection process started and therefore there may be uncertainties on the reliability of the figures.

Average settlement fails before and after the Regulation (% value) AT.14

Value			
Country	Change between before and after the Regulation (percentage points)	T-stat	Significant difference
EU (median)	-1.0%	5.64***	YES
EU (median, balanced sample)	-0.4%	4.97***	YES
Volumes			
EU (median)	-0.6%	1.38	NO
EU (median, balanced sample)	-0.1%	2.01**	YES

Note: *** , ** indicates that the parameter is significant at the 1 and 5% level respectively.
Sources: Competent Authorities, ESMA calculations.

Analysis of temporary short-selling bans

Data[28]

The analysis of the impact of temporary short-selling restrictions uses intraday information, given that some bans were introduced during trading sessions, in order to assess any immediate as well as prolonged impact of bans on market activity. Specifically, most of the econometric analysis is based on 30-minute data (trading volumes and price returns) for two main reasons: (a) consistent time windows are required to conduct econometric analysis on price returns, volatility and average volume of transactions, which excludes any time period smaller than five minutes (e.g. one-minute or tick data) and (b) any frequency higher than 30 minutes results in multiple data gaps and renders comparisons difficult and the analysis potentially unreliable, despite the high volumes of transactions. The latter issue becomes especially problematic when comparing trading on different trading venues where alternative platforms (e.g. not the "home" platform) have much lower volumes.

The analysis uses higher frequency data in the following parts, where the regularity and consistency of data are not required for the analysis: five-minute data for circuit breakers, one-minute data for price formation, tick data for volatility upon ban announcement. Despite the limitations mentioned above, the analysis of price formation uses 5-minute data, given the imperative to have high-frequency time series: delays in price formation would likely not show in 30-minute data, and the inconsistency of one-minute data would substantially increase the risk of distorting the analysis.

Timing

A key observation on short-selling restrictions is that they tend to be imposed with a non-trivial delay relative to the relevant deterioration of market conditions. The procedure requires NCAs to notify ESMA that they intend to put a short-selling ban in place. The supervisors of other EU countries are subsequently notified and have a limited time window to express their agreement or disagreement, and whether they will follow suit on the trading venues they supervise. The ban is subsequently announced on the supervisor's website and relayed later on by news wires (see *price volatility* section) and market participants are expected to comply immediately.

The timing issue — for those bans that are imposed during trading hours — lies in the time lag between the moment a threshold is crossed and the announcement of the ban (Table AT.15). By the time a supervisor announces the restriction and the news is relayed, the sell-off has typically already levelled out, prices have stabilized or rebounded and transaction volumes have started to normalise.

Timing of temporary bans AT.15

	Threshold	Ban
Finmeccanica	09:45	11:30
Intesa San Paolo	11:30	12:15
Banca Carige	09:05	13:20
Monte dei Paschi	10:40	14:30

Note: Threshold is the time when share price dropped 10% or more relative to previous close, using 5-minute price data.

Source: Thomson Reuters Eikon, ESMA.

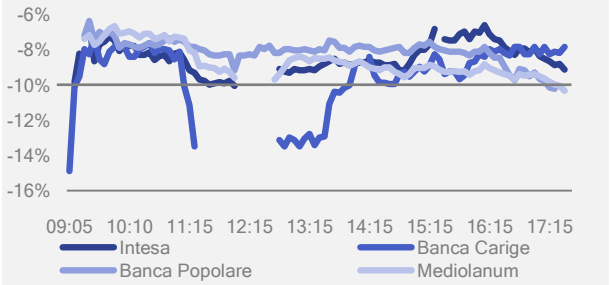
Circuit breakers

[28] The data used in this part were downloaded from commercial databases (Thomson Reuters Eikon and Datastream)

As evidenced by the absence of data for various frequencies before and/or around the time short-selling bans were imposed, there is overlap between so-called "circuit breakers" (i.e. automatic trading interruption mechanisms maintained by trading venues) and temporary bans imposed by supervisory authorities.

For, example, in the case of *Borsa Italiana*, any change greater or equal to 5% relative to the *static price* (the pre-auction price or price of previous close) of a share, and to 3.5% relative to the *dynamic price* (the previous transaction) triggers an automatic interruption of trading on that share by the *Borsa*. On 26 February, trading of Banca Carige, Intesa San Paolo and Mediolanum shares was interrupted at least once due to successive sell-offs. Any restriction on short-selling will therefore have been preceded by a trading interruption on the *Borsa*, which complicates the analysis given the resulting gaps in price and volume data (Chart A.18).

IT bank stocks and trading interruption after Italian elections (26/02/2013) A.18

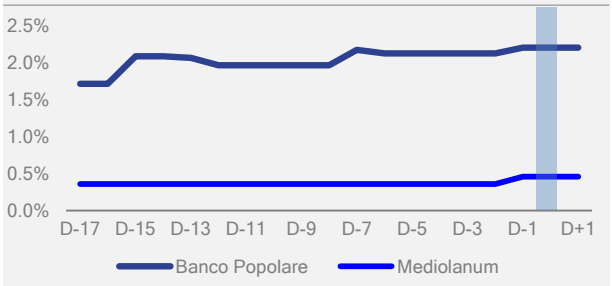


Note: % change from previous close.
Sources: Thomson Reuters Eikon, ESMA.

Overview of net short positions

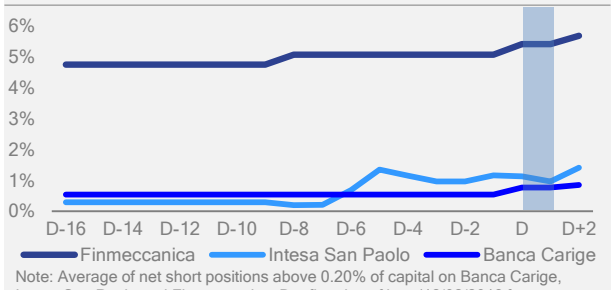
The analysis of net short positions during temporary short-selling ban does not reveal any particular pattern, apart from an absence of upward notifications reflecting market participants' compliance with the ban (Charts A.19 and A.20). Net short positions on Saipem were too small (in percent of capital) to be regularly reported by short position holders.

Banco Popolare and Mediolanum net short positions A.19



Note: Average of net short positions above 0.20% of capital on Banco Popolare and Mediolanum; D (shaded area) = full day ban (27/02/13)
Sources: National Competent Authorities, ESMA.

Carige, Intesa and Finmeccanica net short positions A.20



Note: Average of net short positions above 0.20% of capital on Banca Carige, Intesa San Paolo and Finemccanica. D = first day of ban (12/02/2013 for Finmeccanica, 26/02/13 for Intesa/Carige).
Sources: National Competent Authorities, ESMA.

Volume of transactions

The transaction volume of shares tends to decrease during temporary short-selling bans relative to the pre-ban sell-off. However, an observation of trading volumes, based on 30-minute data, shows the following trends: (1) transaction volumes peak during the initial sell-off (upon market opening); (2) volumes progressively decrease as prices stabilize, but remain above average; (3) a short-selling ban is imposed and trading volumes decrease further. The exact impact of bans on volumes is therefore difficult to disentangle from a simple normalisation of trading post sell-off.

These steps can be observed for stocks on which a ban was imposed during a trading session (Finmeccanica, Intesa San Paolo, Banca Carige) and for Saipem. For the others (i.e., Banco Popolare and Mediolanum), while trading volumes also decreased following the initial sell-off, they remained relatively high and peaked again later in the day as a second sell-off brought prices below the -10% threshold, triggering the supervisory reaction.

Three periods are defined in order to compare average trading volumes per 30 minutes:

- *Normal times*: defined as the five days prior to the sell-off and five days after the ban is lifted;
- *Pre-ban*: defined as the period from the beginning of the sell-off to the imposition of the ban;
- *Ban*: from the imposition of the ban to the moment it is lifted.

Average transaction volumes of stocks under ban — AT.16

	Normal times	Pre-ban	Ban
Saipem	282,378	3,439,112	967,644
Finmeccanica	456,128	3,750,746	1,095,615
Intesa San Paolo	9,395,944	38,071,910	10,570,548
Banca Carige	166,671	1,637,999	244,298
Banco Popolare	948,657	1,845,809	761,558
Mediolanum	147,303	524,554	110,965
Banca Monte dei Paschi	10,539,990	27,017,762	9,525,206

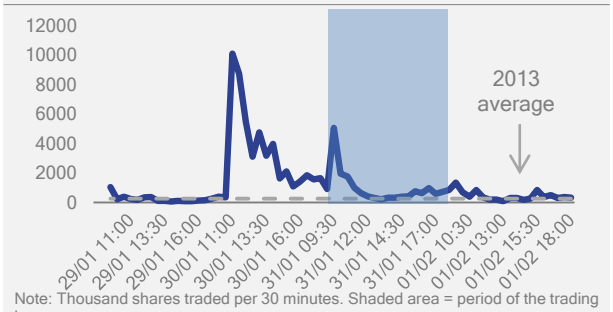
Notes: Average number of transactions per 30 minutes; normal times using five days before and after the imposition of ban and lift. Pre-ban defined as period between sell-off and ban imposition.
Sources: Thomson Reuters Eikon, ESMA.

The average number of transactions per 30 minutes during the pre-ban period is anywhere between two and 12 times higher than during normal times. There is a correlation between the extent of price drop and the increase in transaction volumes, with Saipem and Banca Carige experiencing both the sharpest sell-offs (-37.6% and -14.9%) and the largest per cent increases in transaction volumes; in contrast, Banco Popolare and Mediolanum only crossed the 10% threshold towards the end of the relevant trading day while transaction volumes increased only two or threefold.

After the termination of the short-selling restriction, average transaction volumes fall sharply relative to the pre-ban period (-71.8%; Charts A.21 through A.26). Volumes tend to remain higher than during normal times, but this is not true of all stocks (i.e. for Banco Popolare and Mediolanum, transaction volumes dropped below volumes in normal times; however the initial trading peak during the sell-off was relatively smaller than for the other stocks).

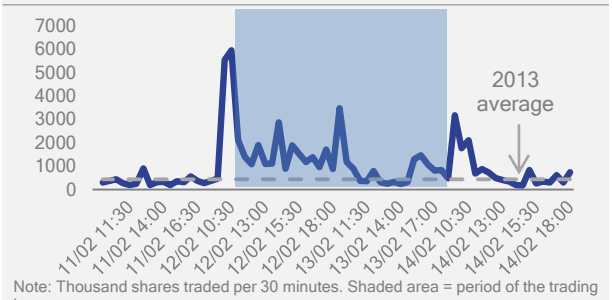
The analysis holds when using higher frequency data. One limit of this approach, however, is that no control groups were used to observe changes in transaction volumes.

Saipem: Trading volumes around ban A.21



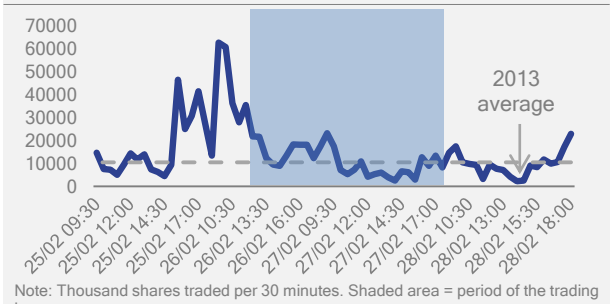
Note: Thousand shares traded per 30 minutes. Shaded area = period of the trading ban.
Sources: Thomson Reuters Eikon, ESMA.

Finmeccanica: Trading volumes around ban A.22



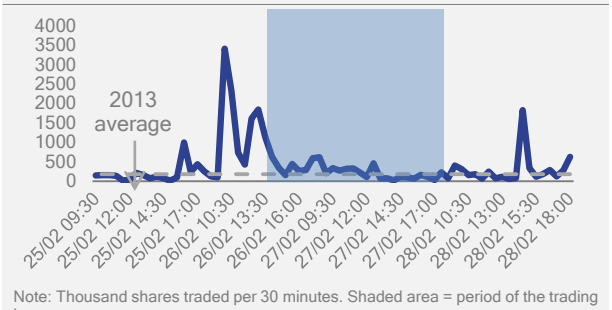
Note: Thousand shares traded per 30 minutes. Shaded area = period of the trading ban.
Sources: Thomson Reuters Eikon, ESMA.

Intesa San Paolo: Trading volumes around ban A.23



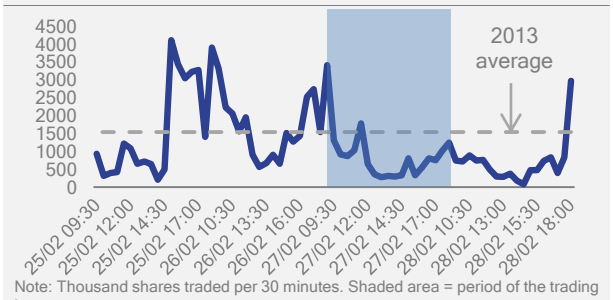
Note: Thousand shares traded per 30 minutes. Shaded area = period of the trading ban.
Sources: Thomson Reuters Eikon, ESMA.

Banca Carige: Trading volumes around ban A.24



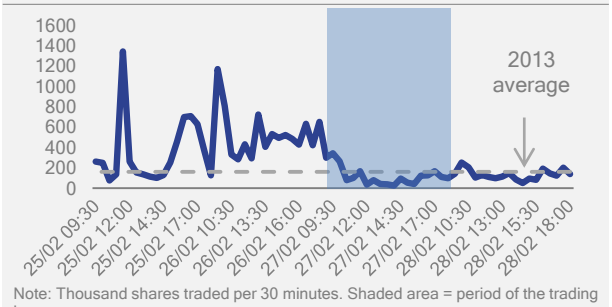
Note: Thousand shares traded per 30 minutes. Shaded area = period of the trading ban.
Sources: Thomson Reuters Eikon, ESMA.

Banco Popolare: Trading volumes around ban A.25



Note: Thousand shares traded per 30 minutes. Shaded area = period of the trading ban.
Sources: Thomson Reuters Eikon, ESMA

Mediolanum: Trading volumes around ban A.26



Note: Thousand shares traded per 30 minutes. Shaded area = period of the trading ban.
Sources: Thomson Reuters Eikon, ESMA.

Price formation

Temporary bans do not seem to have a significant impact on price formation. The analysis is limited to observing auto-correlation, relative transaction volumes and price behaviours as the periodicity of bid and ask price data (daily) does not allow to assess intraday market liquidity by using bid-ask spreads.

For each share, we calculated the first-order autocorrelation on five-minute price returns, called AR[1] (30-minute price returns did not produce any useful results), in order to determine whether returns in T may affect returns in T+1. A significant impact would be synonym of slow price formation process. The observation period includes five business days before and after the bans divided in three sub-periods: pre-ban, ban and post-ban. We then compared the AR[1] of the sub-periods with a Chow breakpoint test, in order to determine whether there is a structural breakpoint induced by the introduction of a ban that would result in slower price formation:

- For one share (Mediolanum) there is a significant difference, with AR[1] becoming significant upon introduction of the ban; however, AR[1] remains significant even after the ban is lifted.
- For three shares out of seven, we find a significant AR[1] for the period as a whole. However, for two of them (Intesa, Carige) there was no significant difference between coefficients during or outside of the ban; for the last one (Finmeccanica), the AR[1] becomes non-significant during the ban.
- For the other shares (Banco Popolare, Monte dei Paschi, Saipem) the AR[1] is non-significant throughout the time period.

In conclusion, the ban has significantly slowed the price formation process in only one out of the seven cases, with price formation remaining slow even after the ban was lifted. We tested for robustness by changing the ban introduction and lift times and obtained similar results.

On volumes, since temporary bans are imposed unilaterally by national supervisors on the instrument's main platform without an obligation for other EU supervisors to follow suit on alternative trading venues, a substitution effect that would increase the volume of transactions on platforms where short-selling is still allowed could be expected *ceteris paribus*.

While uneven data granularity does not allow for a comparison of similar platforms, e.g. Milan and Frankfurt exchanges due to much lower trading volumes of IT stocks on the latter, comparisons can be drawn with MTFs such as Chi-X (Table AT.17). The analysis focuses here again on transaction volumes per 30 minutes. For stocks under restriction on both the main (Milan) and the alternative venue (Chi-X), volumes after the sell-off decrease at a comparable scale once the ban is introduced: -70.9% on average for Chi-X versus -71.8% for Milan; for stocks without restrictions on the alternative venue, volumes dropped by 61.5%. This is consistent with the idea that short-selling bans may reduce trading volumes.

Similar differences can be observed for volumes during the ban relative to volumes in normal times: The trading volume of stocks under ban on Chi-X was on average 7.8% lower than in normal times, while volumes for stocks without ban on Chi-X (but banned in Milan) remained 48.6% higher. However, it would be premature to conclude that a substitution effect is significantly impacting volumes: The unrestricted shares on Chi-X also display higher volumes on the Milan exchange than during normal times, despite the short-selling ban in place. This seems to reflect stock specificity rather than a general effect.

Chi-X: average transaction volumes — AT.17

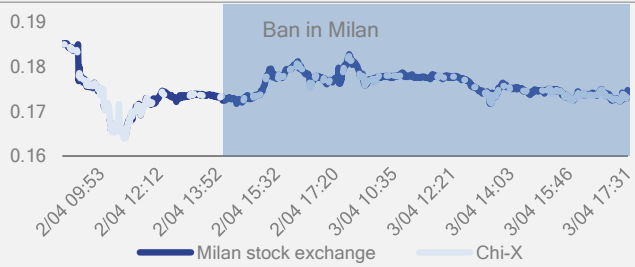
	Normal times	Pre-ban	Ban
Stocks with short-selling ban			
Saipem	80,925	291,962	89,614
Intesa San Paolo (27/02)	1,971,840	7,822,907	1,564,923
Banca Carige (27/02)	9,280	58,983	13,900
Banco Popolare	170,984	244,499	136,888
Mediolanum	18,865	51,617	7,759
Stocks without ban			
Finmeccanica	56,459	201,255	105,250
Intesa San Paolo (26/02)	1,971,840	7,822,907	2,839,492
Banca Carige (26/02)	9,280	58,983	17,990
Banca Monte dei Paschi	232,836	638,576	251,206

Notes: Average volume of transactions per 30 minutes for stocks under short-selling restrictions in Milan. short sales of Intesa San Paolo and Banca Carige shares were allowed on 26 Feb but banned on 27 Feb 2013.

Sources: Thomson Reuters Eikon, ESMA.

On prices, given that the number of transactions is generally much lower on alternative trading venues, the granularity of data does not allow for all shares a second-by-second comparison of price movements. However, based on minute-by-minute data on the most liquid shares, the imposition of short-selling bans does not seem to introduce a significant delay in the price reaction to new information (Chart A.27).

Banca Monte dei Paschi trading prices A.27



Note: Minute-by-minute prices on selected trading venues; gaps in the Chi-X line are due to the lower volume of transactions and therefore the absence of price data.
Sources: Thomson Reuters Eikon, ESMA.

Market participants may be faced with uncertainty stemming from the decision of the EU supervisors of other trading venues where the concerned share is traded to either (i) also introduce a short-selling restriction on the trading venues under their jurisdiction, or (ii) not take action. From this, two specific limitations may affect the analysis and therefore our conclusions:

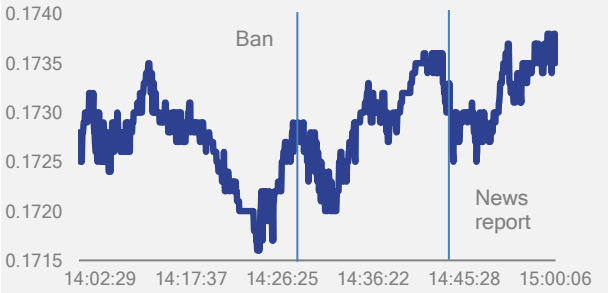
- There is a possibility that market participants stop short sales on all trading venues after a ban is introduced by the supervisor on the home platforms; the ban may in that case also impact metrics such as liquidity and price formation on other trading venues;
- If market participants do choose to proceed with short sales on other trading venues, they retain the possibility to arbitrage with prices on the home platforms where the emergency measure is in place; this may affect the price formation analysis.

Price returns and volatility

Temporary bans do not seem to have a significant impact on price volatility, and have a small positive impact on returns (at the limit of significance) of the shares under restriction.

First, the announcement of short-selling restrictions does not seem to increase volatility. For bans introduced during trading sessions, there was on average a 5- to 15-minute lag before the news of a short-selling ban was relayed by news wires (Table AT.18). Although this could partially be explained by the news diffusion time with market participants reacting non-simultaneously, there were no apparent changes in transaction volumes (using five-minute data) or unusual price movements (using tick data) either upon the announcement of the ban or diffusion of the news (Chart A.28).

Monte dei Paschi: Share price on April 2 A.28



Note: Tick price in EUR.
Sources: Thomson Reuters Eikon, ESMA.

Diffusion time of ban news AT.18

	Ban	Newswire
Intesa San Paolo	12:15	12:19
Banca Carige	13:20	13:31
Banca Monte dei Paschi	14:30	14:44

Source: Thomson Reuters Eikon, ESMA.

Second, the econometric analysis suggests that temporary bans do not trigger significant changes in price volatility for stocks subject to the ban — i.e. the size and direction of the impact on volatility is too uncertain to be conclusive. Although volatility is lower during the ban, this is mainly explained by lower overall stock market volatility as measured by the volatility of MIB returns and of IT total financial sector index (Tables AT.19 and AT.20).

Temporary restrictions and volatility of returns AT.19

	No ban	Pre-ban	Ban
MIB	0.50%	1.49%	0.37%
Index of financial sector	0.60%	2.28%	0.44%
Intesa San Paolo	0.77%	2.61%	0.51%
Banca Carige	0.94%	4.15%	0.64%
Banco Popolare	0.91%	1.60%	0.90%
Mediolanum	0.58%	1.83%	0.37%

Notes: Standard deviation of 30-minute returns around elections in Italy; temporary bans were introduced on the four bank stocks included above.

Source: Thomson Reuters Eikon, ESMA.

Effect of temporary bans on volatility AT.20

	Coefficient	t-stat	P value
Ban using index of financial returns as control variable	0.004	0.08	0.938
Ban using MIB as control variable	-0.003	-0.06	0.957

Note: OLS regression; the test was not significant.

Source: Thomson Reuters Eikon, ESMA.

A model used to calculate abnormal returns (Box 4) shows that short-selling restrictions may increase returns marginally: During temporary bans, the 30-minute returns of shares under restriction is on average 0.1 percentage points higher than for those of an IT financial sector composite index. This might be explained by some short-sellers unwinding their positions, or the bans limiting the number of new net short positions, thereby supporting prices.

Box 4: Measuring abnormal returns

The analysis focuses on the abnormal 30-minute returns of four banks (Intesa San Paolo, Banca Carige, Banco Popolare and Mediolanum) on which temporary short-selling bans were imposed as a result of the same event–the uncertain outcome of the Italian general elections on 25 February 2013.

In order to assess the impact of the short-selling restriction on returns, the following two methods are applied:

1. The observed returns of the four banks are regressed on a set of control variables (returns of the financial sector index calculated by Thomson Reuters) and on a dummy variable:

$$R_i = \alpha + \beta * I_i + \gamma * Ban_i + \varepsilon$$

where R_i is the observed return in period i, α is a constant, I_i is the financial sector index return in period i, and Ban_i is a variable equal to 1 during the short-selling ban and 0 otherwise.

2. Alternatively, the observed returns of the four banks are regressed on the financial sector index in order to determine the correlation with observed bank returns; excess returns are then calculated by subtracting predicted returns from the observed returns; then excess returns are regressed on the ban:

$$R_i = \alpha + \beta * I_i + \varepsilon$$
$$\overline{R_i} = R_i - \alpha - \beta * I_i$$
$$\overline{R_i} = \nu + \mu * Ban_i + \varepsilon$$

where R_i is the observed return in period i, α and ν are constants, I_i is the financial sector index return in period i, $\overline{R_i}$ is the predicted return in period i, Ban_i is a variable equal to 1 during short-selling bans and 0 otherwise.

Both panel regressions use fixed effects to capture the individual characteristics of the four bank returns. The coefficients of γ in method 1 and ι in method 2 are very close, small (see Table T.29) and at the limit of significance. Given that bans on Banca Carige and Intesa San Paolo were introduced in-between data points (i.e. at 12.15 while our data points are at 12:00 and 12:30), robustness was checked by giving Ban_i the value 1 from different times on, including after the trading interruptions ended; the ban variable remains significant at the 10% level.Regressions were also run with much earlier ban times in case market participants had anticipated the ban, and this yielded non-significant results. Using the MIB index rather than the financial sector index also lead to non-significant results.

Among the limitations to this approach are: endogeneity of the financial sector index and the four banks used in the panel; the gaps in data due to circuit breakers on specific stocks; the accuracy of price data and information loss related to the use of 30-minute prices.

Abnormal bank returns during bans T.29

	Method 1			Method 2		
	Coefficient	t-stat	P-value	Coefficient	t-stat	P-value
Ban using index of financial returns as a control variable	0.001*	1.78	0.076	0.001*	1.77	0.077

Ban using MIB as a control variable	0.000	1.24	0.215	0.000	1.24	0.216

Note: 30-minute returns calculated as natural logarithms; * indicates that the parameter is significant at the 10% level; the values displayed here use ban times at 13:30 for both Carige and Intesa, once trading interruptions have ended.
Sources:Thomson Reuters Eikon, Datastream, ESMA calculations.

Impact of lifting temporary short-selling bans

The lifting of temporary short-selling restrictions does not seem to have any impact on markets. Overall, during the day following the lift, prices seem to remain stable and volatility broadly unchanged relative to the ban period. While trading volumes peak upon markets reopening, this seems to be a standard feature of stock markets and there is no specific pattern suggesting that "pent-up" short-sales might be taking place (AT.21).

However, in all seven instances, short-selling restrictions were lifted at close of business. Given the short time span of these bans and the associated importance of observing intraday price behaviours and trading volume, the capacity to analyse the impact of temporary ban lifts is thus quite limited.

Average transaction volumes		AT.21
	Normal times	Ban lift
Finmeccanica	642,025	342,534
Saipem	165,474	113,805
Intesa San Paolo	14,273,809	14,003,677
Banca Carige	192,490	356,400
Banco Popolare	1,701,113	731,372
Mediolanum	171,118	196,668

Notes: Transaction volumes per 30 minutes until 11am.
Sources: Thomson Reuters Eikon, ESMA.

Impact of lifting longer-term bans

Based on the limited existing evidence, the lifting of long-term short-selling restrictions seems to *increase* trading volumes, to have no significant impact on bid-ask spreads and to have mixed effects on volatility.

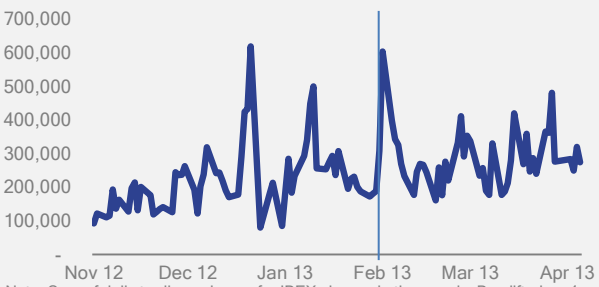
Although nolong-term bans have been imposed since the introduction of the Regulation, there are two existing instances where pre-existing bans were lifted since 1 November 2012. In Greece, a ban introduced on 24 July 2012, preventing short sales of shares traded on the Athens Exchange, was partially lifted on 1 February 2013, with seven bank stocks comprising the FTSE/Athex Banking Index still under short-selling restriction until 31 July 2013. In Spain, a similar ban introduced on 1 November 2011 was left to expire (for all shares) on 1 February 2013. We used daily data to assess the impact of the ban lift on market conditions.

On transaction volumes, the lift may have a positive impact:

- In Spain, daily transaction volumes averaged 222.9 million from 1 November 2012 to 31 January 2013, versus 288.1 million thereafter. This compares for example with average trading volumes in Italy — an equity market with broadly similar characteristics in terms of index performance, volatility and transaction volumes — shrinking 0.3% over the same period. In addition, the ban lift in Spain was immediately followed by a peak in volumes (+95.5%) relative to the previous day (Chart A.29). While this may have been exaggerated by a poor US job report that same day, trading volumes of Italian equities only increased 2.8% in comparison.

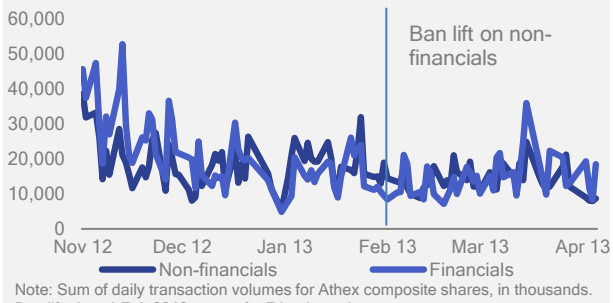
- In Greece, daily transaction volumes for non-financials averaged 18.7 million before and 14.0 million (-25.1%) after the lift; the drop was larger for financials still under restriction, from 21.0 million to 14.8 million (-29.7%; Chart A.30). In contrast, trading of Portuguese non-financials increased 7.9% over the same period versus 18.7% for financials, consistent with the idea that keeping a short-selling ban on Greek financials may have reduced transaction volumes there.

Spanish stocks: daily transaction volumes A.29



Note: Sum of daily trading volumes for IBEX shares, in thousands. Ban lifted on 1 Feb 2013
Sources: Thomson Reutsrs Datastream, ESMA.

Greek stocks: daily transaction volumes A.30

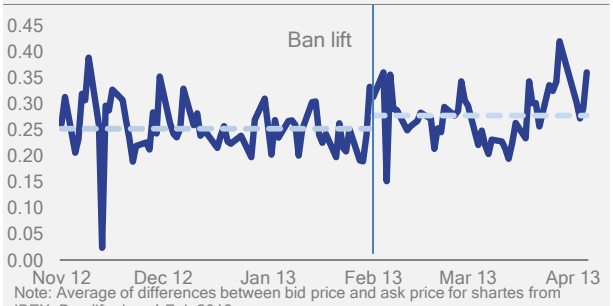


Note: Sum of daily transaction volumes for Athex composite shares, in thousands. Ban lifted on 1 Feb 2013 except for 7 bank stocks.
Sources: Thomson Reuters Datastream, ESMA.

On bid-ask spreads, the impact of the lift is not significant:

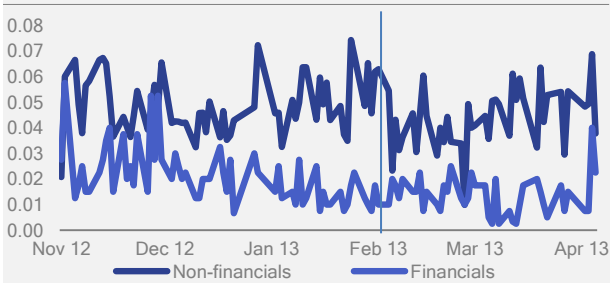
- In Spain, daily bid-ask spreads averaged 0.251 before the lift and 0.277 thereafter (Chart A.31), implying a reduction in liquidity and contrary to what could be expected. Daily bid-ask spreads for Italian equities—used as a control—also increased over the same period of time, from 0.007 to 0.011. The econometric evidence suggests that the impact of the lift on bid-ask spreads in Spain is inconclusive.
- In Greece, bid-ask spreads decreased from 0.049 to 0.044 on average for non-financials, comparatively smaller than the drop from 0.021 to 0.014 for financials (-36.1% versus -9.7%, respectively) this would imply that liquidity increased comparatively more for shares that are still under ban (Chart A.32). The econometric analysis suggests that this development is independent from the ban lift, i.e. likely to be specific to the Greek equity market.

Spanish stocks: Average bid-ask spread A.31



Note: Average of differences between bid price and ask price for shartes from IBEX. Ban lifted on 1 Feb 2013.
Sources: Thomson Reuters Datastream, ESMA.

Greek stocks: bid-ask spreads A.32



Note: Average of differences between bid price and ask price for shares from Athex Composite. Ban lifted on 1 Feb 2013 except for 7 bank stocks.
Sources: Thomson Reuters Datastream, ESMA.

On price volatility, the lift had mixed effects:

- In Spain, the volatility of daily returns (as measured by standard deviation) increased 30.7% (Chart A.33). In contrast, volatility increased 18.3% in Italy over the same period of time. The econometric evidence suggests that there is no significant impact from the ban after controlling for overall market volatility using the volatility of Italian equities and the Eurostoxx50.
- In Greece, volatility increased 16% for shares on which the ban was lifted, but decreased 36% for financials (Table AT.22). The econometric analysis shows that the ban lift had a significant impact

(at the limit of significance) on the volatility of non-financials, resulting in higher volatility after the ban was lifted (Table AT.23).

On price returns the lift did not seem to have any significant impact.

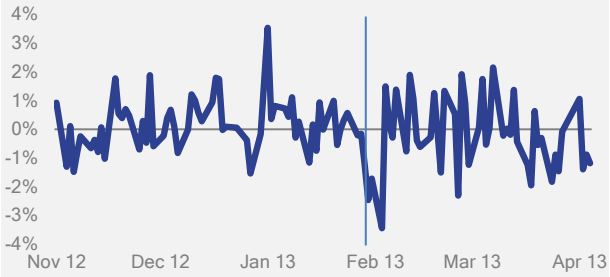
Greek stocks: Volatility and average daily returns AT.22

	Returns		Volatility	
	Non-Financials	Financials	Non-financials	Financials
During ban	0.7%	-0.2%	1.8	4.9
After ban lift	-0.5%	-1.1%	2.1	3.1

Notes: Average daily returns and total standard deviation before and after ban is lifted on non-financial stocks on 1 Feb 2013.

Sources: Thomson Reuters Datastream, ESMA.

Spanish stocks: Average daily returns A.33



Note: Average daily returns calculated as natural log for 35 liquid shares from IBEX. Ban lifted on 1 Feb 2013

Sources: Thomson Reuters Datastream, ESMA.

Impact of ban lift on price returns and returns volatility AT.23

	Returns			Volatility		
	Coeff	t-stat	P value	Coeff	t-stat	P value
Ban lift in Spain	0.001	1.50	0.133	0.002	1.39	0.164
Ban lift in Greece	-0.002	-0.51	0.612	0.009*	1.75	0.080

Notes: Impact of ban lift (1 Feb 2013) using difference-in-differences; in Greece, using financials as control group and non-financials as treatment; in Spain, using Italian equities as control group. * indicates that the parameter is significant at the 10% level.

Sources: Thomson Reuters Eikon, ESMA.

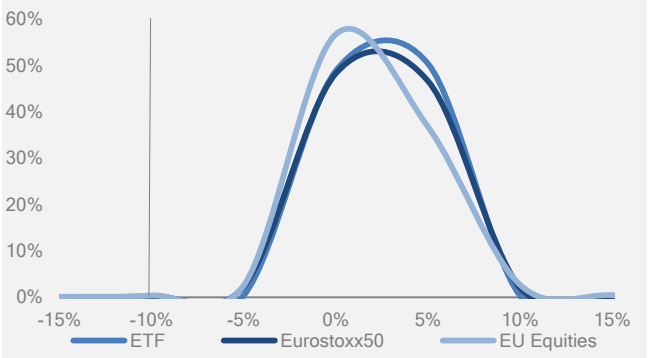
One of the limitations of our approach is the control group used for ES shares: although IT equities have some features similar to ES equities, the ES equity market also has specificities that may not entirely be captured by the control group. Another limitation is the current context in Greek financial markets, where trading volumes have been very thin and equity prices low since before the entry into force of the Regulation. This may distort some of data used to measure volatility and liquidity.

Thresholds for significant price fall

To assess the relevance of existing thresholds to identify significant price falls, an empirical approach was followed based on the historical distribution of daily returns. Daily returns were computed for a sample of stocks (2,216 EU equities and the constituents of the Eurostoxx50 index), Exchange-Traded Funds (400 ETFs) and bonds (266 EUR sovereign bonds, 40 UK sovereign bonds, 1,336 EUR-denominated corporate bonds and 39 GBP-denominated corporate bonds) over the last five years.

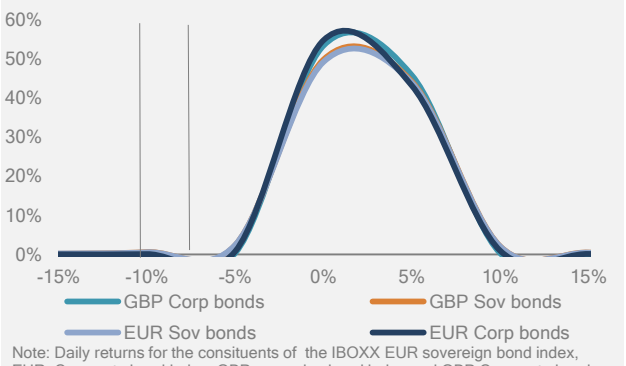
As shown in Charts A.34 and A.35, a small part of the distribution lies below the thresholds.

Distribution of daily returns over the last five years A.34



Note: Daily returns for 400 ETF, 2216 EU equities, Eurostoxx50 constituents.
Sources: Thomson Reuters Datastream, Thomson Reuters Eikon, ESMA.

Distribution of daily returns over the last five years A.35



Note: Daily returns for the consituents of the IBOXX EUR sovereign bond index, EUR. Corporate bond index, GBP sovereign bond index and GBP Corporate bond index.
Sources: Thomson Reuters Datastream, Thomson Reuters Eikon, ESMA.

For equities, a smaller sample made of the constituents of the Eurostoxx50 index was also used and both the distribution of daily returns and intraday low returns were computed.

As shown in Table AT.24, for equities, the thresholds was crossed in less than 0.6% of the time. Based on intraday low returns for equities, only 0.9% of all negative returns would cross the thresholds. For ETFs, only 0.2% of daily returns were at less than the 10% threshold. For corporate bonds, the thresholds would be crossed less than 0.2% of the time. However, for sovereign bonds the share is much higher at around 2.2% for euro area sovereign bonds and 1.7% for UK sovereign bonds. This higher share for sovereigns is partially linked to lower thresholds [29] (7% against 10% for corporate bonds), but mainly to the current low level of sovereign yields. This implies that even small absolute changes in yields can lead to large relative changes (used for setting the thresholds).

On the appropriateness of setting thresholds for UCITS, it appears that i) only listed UCITS can be shorted and ii) most listed UCITS are ETFs which already fall under the scope of the Regulation. Therefore extending the regulation to all listed UCITS would have in the short run a limited impact, expect in a few countries such as Denmark where all UCITS are listed.

Overall, based on the empirical evidence, the current thresholds set to identify significant price fall appear to cover an extreme part of the distribution of returns, indicating that these thresholds would not be crossed very often for equities and corporate bonds. For sovereign bonds it appears that current thresholds lead to a large share of observations crossing the thresholds. If the objective is to have thresholds that

[29] Using the 10% thresholds for sovereign bonds would lead to a share of 1.3% for EUR sovereigns and 0.8% for GBP sovereign bonds.

would cover the same share of events across asset classes, then thresholds for sovereign bonds should be increased.

Number of events where the thresholds were crossed over the last five years AT.24

Asset class	Threshold	Percentage of observations that reach the thresholds	Number of events (total events)
Liquid shares (Eurostoxx50 constituents)	-10%	0.31%	203 (65050)
Liquid shares (Eurostoxx50 constituents), intraday low	-10%	0.90%	490 (54511)
All shares (2216 EU equities)	-10%	0.54%	14223 (2.6mn)
Exchange-Traded Funds (500 ETFs)	-10%	0.02%	35 (185905)
Euro area sovereign bonds (266 bonds)	+7%	2.22%	5074 (228355)
UK sovereign bonds (40 bonds)	+7%	1.73%	636 (36864)
EUR corporate bonds (1336 bonds)	+10%	0.12%	1063 (881984)
GBP corporate bonds (39 bonds)	+10%	0.07%	20 (29849)

Note: The distribution of returns is based on the last five years of daily data.
Sources: Thomson Reuters Datastream, ESMA.

The ban on uncovered sovereign CDS

The Regulation prohibits persons from entering into uncovered sovereign CDS transactions (i.e. where the underlying asset is not owned), unless there is a meaningful correlation (greater or equal to 70%) between the underlying asset or liability and the sovereign CDS.

CDS spreads and sovereign yields

The data used for this analysis are five-year CDS spreads and ten-year sovereign bond yields, daily, starting three months before the entry into force of the Regulation (1 August 2012), and ending three months after (4 February 2013). Stock market indices are also available on a daily basis, but the other two control variables are more problematic: (i) debt-to-GDP ratios are only available on a quarterly basis, and we are using annual forecasts from the IMF and the OECD for 2013; (ii) retail sales are not available on a monthly basis for each country in the sample, and we therefore used quarterly data. The uneven quality of the data is the main limitation of this analysis.

The treatment and control groups include the following countries:

Treatment	Control
DE	BR
CZ	HK
FR	JP
IE	TH
BE	MY
DK	CN
NO	CL
ES	CO
SE	IS
NL	ID
AT	KZ
BG	PA
EE	PE
HU	ZA
IT	PH
LV	TR
LT	RU
PL	VN
SI	IL
RO	QA
SK	MX
UK	KR
FI	US
	AU

Concerning the estimation procedure, three control variables are introduced in order to capture pre-ban effects that may introduce a bias in the results. The standard errors were clustered at the country level, to obtain the following results:

Impact of Regulation on CDS spreads and sovereign bond yields AT.25

	Without control variables			With control variables		
	Coefficient	t-stat	P-value	Coefficient	t-stat	P-value
CDS spreads	-31.339	-3.5	0.001***	-26.585*	-1.85	0.075
Sovereign bond yields	-0.192	-1.58	0.122	-0.129	0.177	0.471

Note: diff-in-diff estimator, controlling for debt to GDP ratio, national stock market indices and retail sales indices.
*** and * indicate that the parameters are significant at the 1% and 10% level, respectively.
Sources: Thomson Reuters Eikon, Thomson Reuters Datastream, ESMA.

Assessment of CDS liquidity following the entry into force of the Regulation

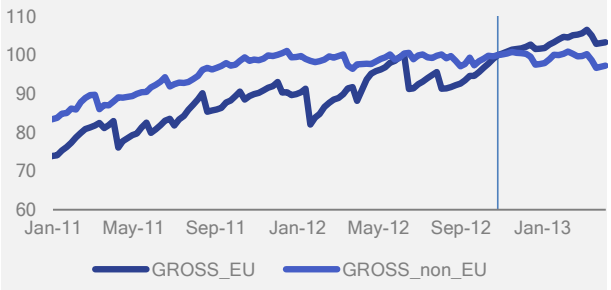
The ban on uncovered CDS on sovereign debt could have an impact on the CDS market, by potentially decreasing liquidity, as market participants are subject to additional constraints in order to buy CDS on sovereigns. In particular, in its latest Global Financial Stability Report, the International Monetary Fund pointed out that "*in the wake of the European ban, SCDS [Sovereign Credit Default Swaps] market liquidity already seems to be tailing off, although the effects of the ban are hard to distinguish from the influence of other events that have reduced perceived sovereign credit risk*"[30].

CDS volumes

Net notionals on EU sovereign have substantially decreased since August 2011 (A.37), however gross notionals and number of contracts have increased (A.36 and A.38). Since the entry into force of the ban, the decrease in net notionals is similar in the EU and in the control group, indicating that the likely impact of the Regulation on volumes may either not be significant or already took place before the entry into force of the Regulation.

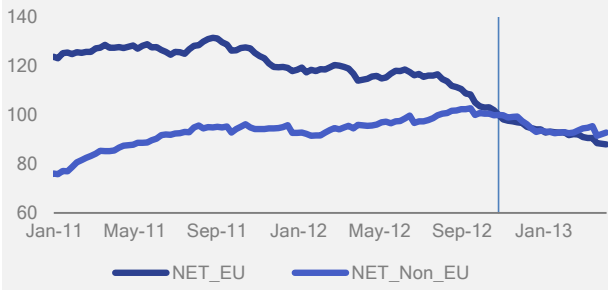
However, for some indices such as the iTraxx SOVX Western Europe, both gross and net notionals, have substantially declined, from USD 14bn early 2012 to USD 8bn in April 2013[31]. One likely explanation is that, given that the index is based on an average of 14 EU sovereign CDS, correlations with the sovereign yields of individual countries are not high enough (i.e. greater than 70%) to allow non-holders of sovereign bonds to buy the iTraxx without holding the 14 EU sovereign bonds.

Gross notionals A.36



Note: Gross notionals outstanding
Sources: DTCC, ESMA.

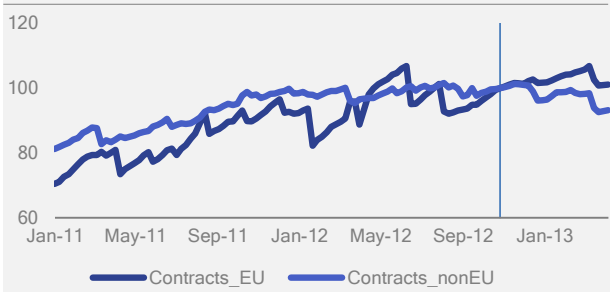
Net notionals A.37



Note:Net notionals outstanding
Sources: DTCC, ESMA.

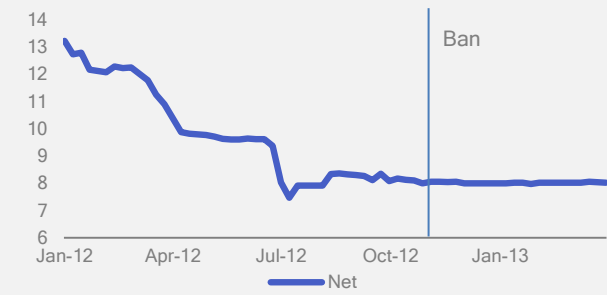
[30] See IMF (2013).
[31] The administrator of this benchmark, Markit indicated in February 2013, that due to low trading activity, the index would not be rolled whereas the index is supposed to be rolled every 6 months.

Number of contracts A.38



Note: Number of conracts outstanding.
Sources: DTCC, ESMA.

SovX Western Europe: Net notional CDS volumes A.39

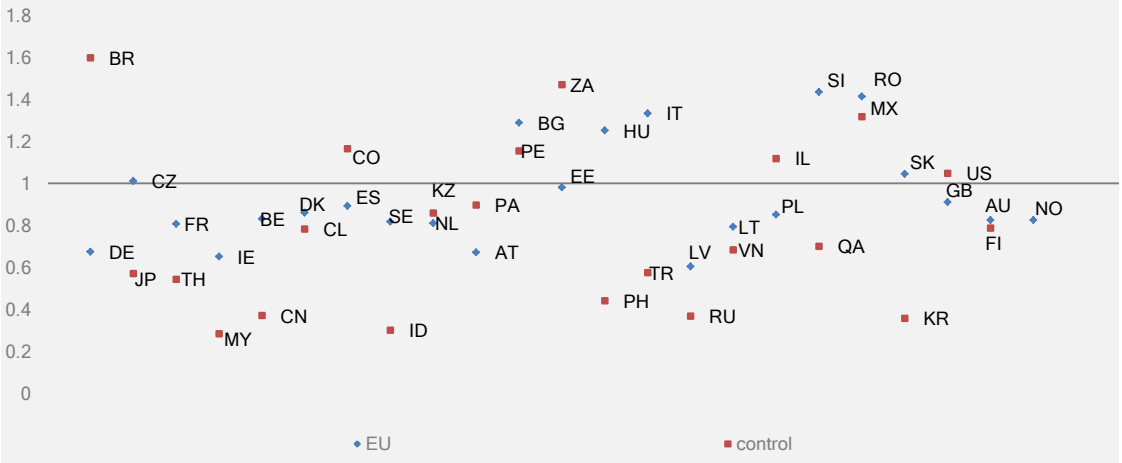


Note: Number of notional CDS outstanding, USD bn equivalent, weekly data.
Sources: Thomson Reuters Eikon, DTCC, ESMA.

CDS market liquidity

To see the effect of the ban on liquidity, the ratio of the average bid-ask spread after the ban over the average bid-ask spread before the ban is computed. If this ratio is above one, the bid-ask spread has increased and thus liquidity declined. No clear pattern emerges from Chart A.40. Even if a few countries are above 1, the majority of EU countries have seen an improvement in CDS market liquidity compared to 2010-11. Moreover, there is no clear difference between EU countries and the control group.

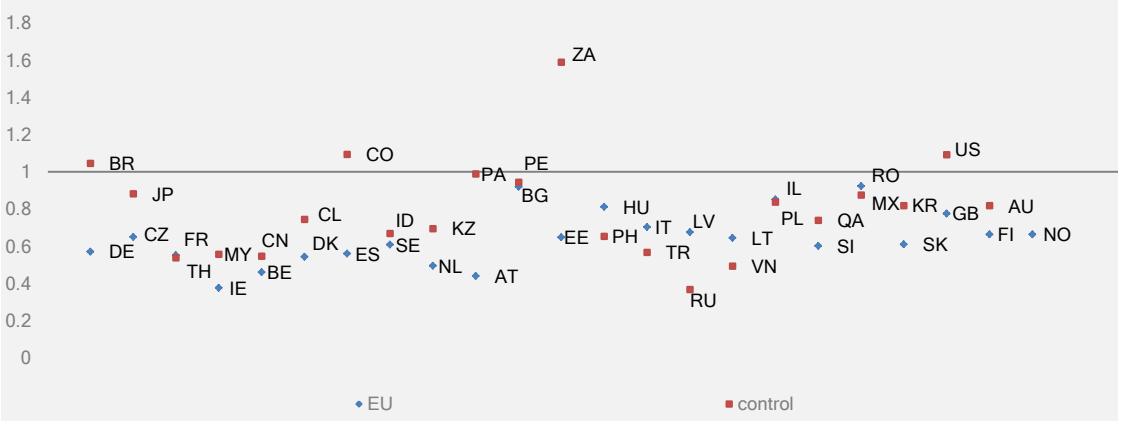
No drop in liquidity compared to 2010 to 2011 period A.40



Note: Average bid-ask spread after the ban over the average bid ask-spread in 2010 and 2011.
Sources: Bloomberg, ESMA.

This outcome is even more evident when comparing liquidity after the ban with the same period a year earlier. Here, liquidity has improved for all European countries in the sample.

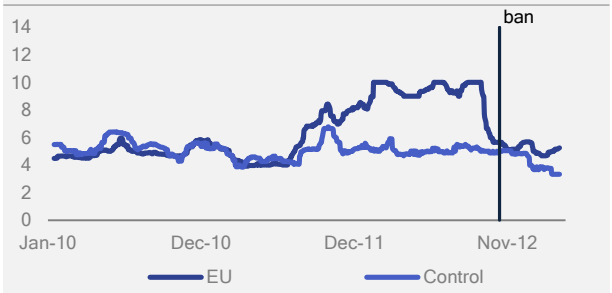
No clear drop in liquidity compared to the November 2011 - April 2012 period A.41



Note: Average bid-ask spread after the ban over average bid ask-spread during the same time one year before.
Sources: Bloomberg, ESMA.

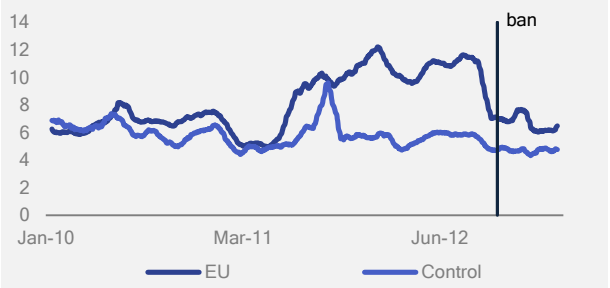
Looking at the evolution of the median and the mean across all countries in each group, no large increase in the bid-ask spreads after the ban can be seen (Charts A.42 and A.43) but rather a sharp decline (i.e. an improvement in liquidity), and some degree of convergence between Europeans and non-Europeans starting in August 2012.

Median bid-ask spread. A.42



Note: Cross section median in the two groups over time.
Sources: Bloomberg, ESMA .

Average bid-ask spreads. A.43

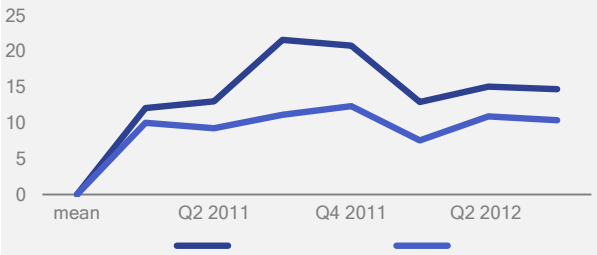


Note: Cross section average in the two groups over time.
Sources: Bloomberg, ESMA .

CDS market activity

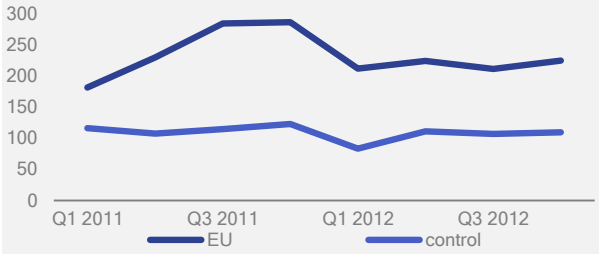
Looking at the average number of trades per day and per reference entity, as well as the average notional amount traded per day and per reference entity, we do not observe a drop following the entry into force of the Regulation, thus questioning the view that the ban has heavily reduced the CDS market activity.

No decline in average number of trades A.44



Note: Average: number of trades per reference entity in the two groups. from Q1 2011 to Q4 2012, daily.
Sources: DTCC, ESMA.

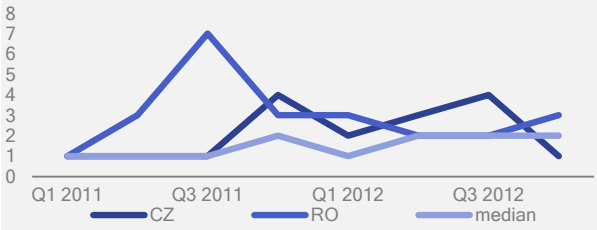
No decline in average notional amount traded A.45



Note: Average notional amount traded traded per reference entity in the two groups. from Q1 2011 to Q4 2012, daily.
Sources: DTCC, ESMA.

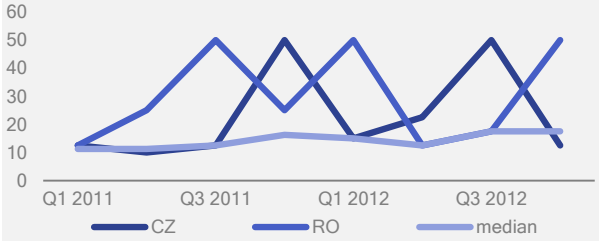
Although some Eastern-European countries have experienced a drop in the average daily number of trades (CZ, LV, LT, PL) or the average daily notional amount traded (CZ, LV, LT) from Q3 to Q4 2012, the median of this group of countries (CZ, BG, EE, HU, LV, LT, PL, SI, RO, SK) has not changed.

heterogeneity in the average number of trades among Eastern-European countries A.46



Note: Median market activity for Eastern-European sovereign CDS (CZ, BG, EE, HU, LV, LT, PL, SI, RO, SK). From Q1 2011 to Q4 2012, daily.
Sources: DTCC, ESMA.

heterogeneity in the average notional amount traded in Eastern-European countries A.47

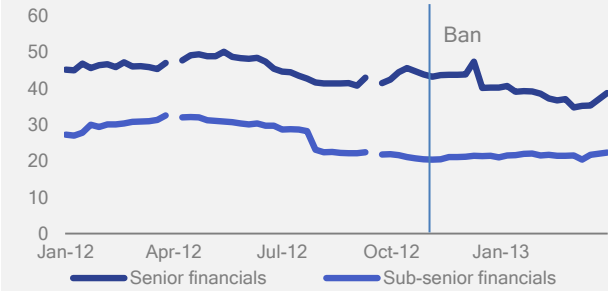


Note: Median market activity for Eastern-European sovereign CDS (CZ, BG, EE, HU, LV, LT, PL, SI, RO, SK). From Q1 2011 to Q4 2012, daily.
Sources DTCC, ESMA.

Impact of the sovereign CDS ban on other asset classes

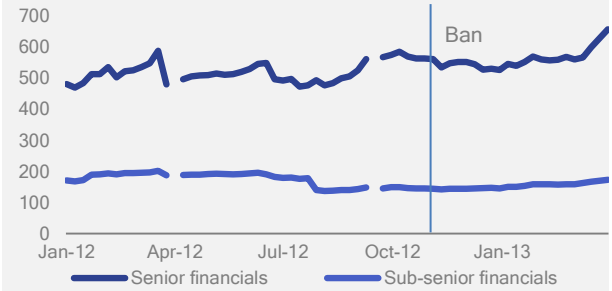
One potential effect of the ban could be that market participants would use CDS on, for example, financials in order to hedge positions for which they used sovereign CDS in the past. Given that CDS on financials are usually correlated with sovereigns this could be used for proxy hedging. However, net notional on the two main CDS indices on financials do not seem to have increased much since the entry into force of the Regulation, with a decrease of USD 7bn for the iTraxx Europe Senior Financials (-16% from USD 45bn to USD 38bn) and a slight increase of USD 1.6bn for the iTraxx Europe Sub-Financials (+8% from USD 20.7bn to USD 22.3bn). However gross notionals have increased by23%, from USD 532bn to USD 656bn for Senior Financials and by 19% from USD 145bn to USD 173bn for Sub Financials (Chart A.46 and A.47).

iTraxx Financials: Net notional CDS volumes A.48



Note: Number of net notional CDS outstanding, USD bn equivalent, weekly data.
Sources: Thomson Reuters Eikon, DTCC, ESMA.

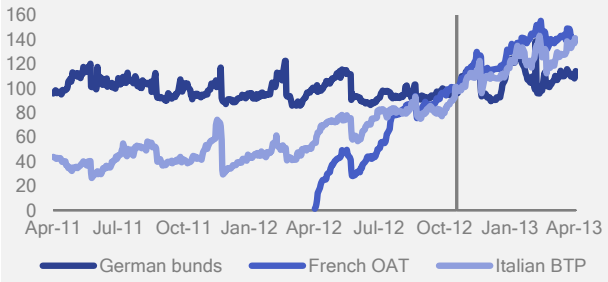
iTraxx Financials: Gross notional CDS volumes A.49



Note: Number of gross notional CDS outstanding, USD bn equivalent, weekly data.
Sources: Thomson Reuters Eikon, DTCC, ESMA.

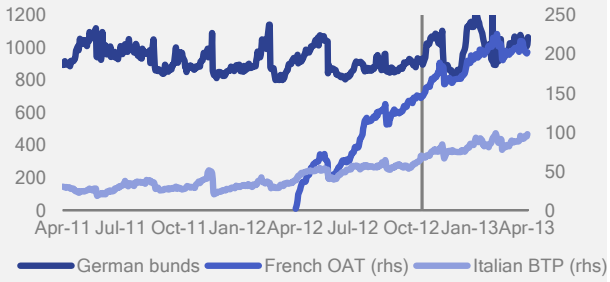
Another potential way to take uncovered short positions on sovereigns can be achieved by selling futures contracts on sovereign bonds. As shown in Charts A.48 and A.49, open interest on sovereign bond futures has increased for FR and IT bonds but did not significantly change for DE. Moreover as Italian and French futures are relatively new products, having been launched by Eurex in September 2009 and April 2012 respectively, the growth may be linked to factors unrelated to the Regulation.

Futures contracts: significant increase for IT and FR A.50



Note: Open positions on futures contracts on sovereign bonds. 1/11/2012=100.
Sources: Thomson Reuters Datastream, ESMA.

Futures contracts: significant increase for IT and FR A.51



Note: Open positions on futures contracts on sovereign bonds. In thousands.
Sources: Thomson Reuters Datastream, ESMA.

Conclusion

Based on empirical evidence, the ban on uncovered sovereign CDS seems to have been followed by reduction in CDS spreads on sovereigns, with no significant changes in the liquidity of the sovereign CDS market, with the exception of sovereign CDS indices.

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